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TrigonometryExercise5 Answers for No.9844

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .2 = \left(\arcsin\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) & .3 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) \\ .4 = (\arcsin(-3) = \textit{undefined}) & .5 = \left(\arctan\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .6 = \left(\arctan(\sqrt{3}) = \frac{\pi}{3}\right) \\ .7 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .8 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .9 = \left(\arccos(0) = \frac{\pi}{2}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(\frac{-1}{2}\right)\right) = \frac{-1}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Sin}(\arctan(-1)) = -\frac{\sqrt{2}}{2}\right) \\ .4 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .5 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .6 = \left(\arccos\left(\mathrm{Sin}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{3}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Csc}\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = 2\right) & .11 = \left(\mathrm{Sec}\left(\arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}(\arctan(7)) = \frac{5\sqrt{2}}{7}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-1}{5}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .3 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-7}{5}\right)\right) = \frac{5\sqrt{74}}{74}\right) \\ .4 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{-4}{9}\right)\right) = -\frac{\sqrt{65}}{4}\right) & .5 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{5}}{7}\right)\right) = \frac{\sqrt{5}\sqrt{11}}{22}\right) & .6 = \left(\mathrm{Sin}\left(\arctan\left(-\frac{\sqrt{7}}{5}\right)\right) = -\frac{\sqrt{7}\sqrt{2}}{8}\right) \\ .7 = \left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{5}}{7}\right)\right) = -\frac{7\sqrt{5}}{5}\right) & .8 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .9 = \left(\mathrm{Tan}\left(\arccos\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{-2}{3}\right)\right) = \frac{2\sqrt{2}\sqrt{5}}{9} - \frac{2}{9}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{4}{7}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{7} - \frac{\sqrt{33}}{14}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{1}{6}\right)\right) = \frac{17}{18}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(3\pi) + \mathrm{Sin}\left(-\frac{15\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{8\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.9872

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .2 = (\arccos(-1) = \pi) & .3 = \left(\arcsin(1) = \frac{\pi}{2}\right) \\ .4 = \left(\arccos\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) & .5 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .6 = (\arccos(\sqrt{3}) = \textit{undefined}) \\ .7 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .8 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .9 = (\arctan(0) = 0) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Sin}(\arctan(1)) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\arctan\left(\mathrm{Tan}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\arccos\left(\mathrm{Sin}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{2\sqrt{3}}{3}\right) & .11 = \left(\mathrm{Csc}\left(\arcsin\left(\mathrm{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = -2\right) & .12 = \left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(\frac{1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sec}\left(\arcsin\left(\frac{-2}{7}\right)\right) = \frac{7\sqrt{5}}{15}\right) & .2 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-5}{6}\right)\right) = -\frac{5\sqrt{61}}{61}\right) & .3 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) & .5 = \left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{2}}{5}\right)\right) = \frac{5\sqrt{3}}{9}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\frac{-3}{7}\right)\right) = -\frac{3\sqrt{10}}{20}\right) \\ .7 = \left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{5}}{6}\right)\right) = -\frac{\sqrt{5}\sqrt{31}}{31}\right) & .8 = \left(\mathrm{Csc}\left(\arctan\left(\frac{3}{4}\right)\right) = \frac{5}{3}\right) & .9 = \left(\mathrm{Tan}\left(\arccos\left(\frac{5}{8}\right)\right) = \frac{\sqrt{39}}{5}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{2}{5}\right)\right) = \frac{2\sqrt{2}\sqrt{21}}{15} + \frac{2}{15}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{5}{9}\right) + \arcsin\left(\frac{-5}{6}\right)\right) = \frac{5\sqrt{11}}{54} + \frac{5\sqrt{14}}{27}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{4}\right)\right) = \frac{1}{8}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{5\pi}{2}\right) + \mathrm{Sin}\left(\frac{3\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{17\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{7\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.9873

$$Ans1 = \begin{bmatrix} .1 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .2 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .3 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) \\ .4 = (\arctan(0) = 0) & .5 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .6 = (\arccos(-\sqrt{2}) = undefined) \\ .7 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .8 = (\arccos(-1) = \pi) & .9 = (\arcsin(0) = 0) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(\frac{-1}{2}\right)\right) = \frac{-1}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .5 = \left(\arcsin\left(\mathrm{Sin}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .6 = \left(\arcsin\left(\mathrm{Cos}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(\frac{7\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Csc}\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = 2\right) & .11 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{-1}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cot}\left(\arctan\left(\frac{5}{7}\right)\right) = \frac{7}{5}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-1}{3}\right)\right) = \frac{3\sqrt{10}}{10}\right) & .3 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{5\sqrt{3}}{3}\right) \\ .4 = \left(\mathrm{Tan}\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{3}\right) & .5 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{2}\sqrt{51}}{51}\right) & .6 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) \\ .7 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) & .8 = \left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{2}}{3}\right)\right) = -\frac{3\sqrt{2}}{2}\right) & .9 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-2}{3}\right)\right) = -\frac{2\sqrt{5}}{5}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{6}\right) + \arcsin\left(\frac{-3}{8}\right)\right) = \frac{\sqrt{11}\sqrt{55}}{48} - \frac{5}{16}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{16} - \frac{3\sqrt{3}}{16}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{8}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{1}{2}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(6\pi) + \mathrm{Sin}\left(-\frac{17\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = -2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.9884

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .2 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .3 = \left(\arctan(\sqrt{3}) = \frac{\pi}{3}\right) \\ .4 = (\arccos(-5) = undefined) & .5 = \left(\arccos(0) = \frac{\pi}{2}\right) & .6 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .8 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\mathrm{Tan}(\arctan(-1)) = -1) & .2 = \left(\mathrm{Cos}(\arctan(\sqrt{3})) = \frac{1}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right) = \sqrt{3}\right) \\ .4 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .5 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\arcsin\left(\mathrm{Cos}\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{3}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(-\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Cot}\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = \sqrt{3}\right) & .11 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{5}}{7}\right)\right) = \frac{\sqrt{5}\sqrt{6}}{18}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(\frac{3}{4}\right)\right) = \frac{4}{5}\right) & .3 = \left(\mathrm{Sec}\left(\arctan\left(\frac{-2}{7}\right)\right) = \frac{\sqrt{53}}{7}\right) \\ .4 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-4}{9}\right)\right) = -\frac{\sqrt{65}}{4}\right) & .5 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{23}}{5}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\frac{5}{7}\right)\right) = \frac{5\sqrt{6}}{12}\right) \\ .7 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-5}{7}\right)\right) = \frac{2\sqrt{6}}{7}\right) & .8 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{1}{5}\right)\right) = \frac{\sqrt{6}}{12}\right) & .9 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{5\sqrt{2}}{2}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{2}{3}\right) + \arcsin\left(\frac{-3}{7}\right)\right) = \frac{2\sqrt{5}\sqrt{10}}{21} - \frac{2}{7}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{18} - \frac{2\sqrt{3}}{9}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{1}{9}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{\pi}{2}\right) + \mathrm{Sin}\left(\frac{9\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.9885

$$Ans1 = \begin{bmatrix} .1 = (\arccos(-1) = \pi) & .2 = (\arctan(0) = 0) & .3 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \\ .4 = (\arcsin(0) = 0) & .5 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .6 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .8 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .9 = (\arcsin(-5) = \mathit{undefined}) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\sin\left(\arcsin\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{3}}{2}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\sin\left(\arccos\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{3}\right) & .5 = \left(\arccos\left(\cos\left(\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .6 = \left(\arcsin\left(\cos\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\tan\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = 2\right) & .11 = \left(\csc\left(\arccos\left(\sin\left(-\frac{17\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\cos\left(\mathrm{ArcSin}\left(-\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} \frac{:)}{:(} \\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ \frac{:)}{:(} \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{7}}{9}\right)\right) = -\frac{\sqrt{7}\sqrt{74}}{74}\right) & .2 = \left(\tan\left(\arccos\left(\frac{5}{7}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .3 = \left(\sin\left(\arctan\left(\frac{\sqrt{7}}{4}\right)\right) = \frac{\sqrt{7}\sqrt{23}}{23}\right) \\ .4 = \left(\sec\left(\arcsin\left(\frac{-5}{8}\right)\right) = \frac{8\sqrt{39}}{39}\right) & .5 = \left(\cos\left(\arctan\left(\frac{-3}{2}\right)\right) = \frac{2\sqrt{13}}{13}\right) & .6 = \left(\cos\left(\arcsin\left(\frac{4}{5}\right)\right) = \frac{3}{5}\right) \\ .7 = \left(\csc\left(\arctan\left(\frac{3}{2}\right)\right) = \frac{\sqrt{13}}{3}\right) & .8 = \left(\sin\left(\arccos\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) & .9 = \left(\cot\left(\arccos\left(-\frac{\sqrt{2}}{3}\right)\right) = -\frac{\sqrt{7}\sqrt{2}}{7}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{2}\sqrt{3}}{3} - \frac{1}{6}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{2}{7}\right)\right) = \frac{\sqrt{5}}{7} - \frac{4\sqrt{2}}{21}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{4}{9}\right)\right) = \frac{8\sqrt{65}}{81}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{4}\right)\right) = \frac{1}{8}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{3\pi}{2}\right) + \sin\left(\frac{\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\sec\left(\arccos\left(\sin\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{4\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.9895

$$Ans1 = \begin{bmatrix} .1 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) & .2 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .3 = \left(\arcsin(1) = \frac{\pi}{2}\right) \\ .4 = (\arctan(0) = 0) & .5 = \left(\arctan\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .6 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \\ .7 = (\arcsin(-7) = \mathit{undefined}) & .8 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .9 = \left(\arccos(0) = \frac{\pi}{2}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\tan(\arctan(-1)) = -1) & .2 = \left(\cos\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .3 = \left(\tan\left(\arccos\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\sin\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{-1}{2}\right) & .5 = \left(\arccos\left(\cos\left(\frac{2\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .6 = \left(\arccos\left(\sin\left(-\frac{\pi}{6}\right)\right) = \frac{2\pi}{3}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(\frac{4\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\arctan\left(\tan\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = 2\right) & .11 = \left(\tan\left(\arcsin\left(\cos\left(-\frac{\pi}{4}\right)\right)\right) = 1\right) & .12 = \left(\mathrm{ArcSin}\left(\cos\left(\mathrm{ArcSin}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} \frac{:)}{:(} \\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ \frac{:)}{:(} \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\csc\left(\arccos\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{7\sqrt{47}}{47}\right) & .2 = \left(\tan\left(\arcsin\left(\frac{5}{8}\right)\right) = \frac{5\sqrt{39}}{39}\right) & .3 = \left(\sin\left(\arccos\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) \\ .4 = \left(\sec\left(\arctan\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{11}}{3}\right) & .5 = \left(\tan\left(\arccos\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{4}\right) & .6 = \left(\cos\left(\arcsin\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}}{5}\right) \\ .7 = \left(\cos\left(\arctan\left(\frac{-7}{4}\right)\right) = \frac{4\sqrt{65}}{65}\right) & .8 = \left(\cot\left(\arcsin\left(\frac{-3}{4}\right)\right) = -\frac{\sqrt{7}}{3}\right) & .9 = \left(\sin\left(\arctan\left(\frac{7}{6}\right)\right) = \frac{7\sqrt{85}}{85}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{-3}{7}\right)\right) = \frac{6\sqrt{10}}{35} - \frac{12}{35}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{5}\right) + \arcsin\left(\frac{5}{7}\right)\right) = -\frac{8\sqrt{6}}{35}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{5\pi}{2}\right) + \sin\left(\frac{7\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\sec\left(\arccos\left(\sin\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{2\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.9898

$$Ans1 = \begin{bmatrix} .1 = \left(\operatorname{arcCos}\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .2 = \left(\operatorname{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .3 = \left(\operatorname{arcTan}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) \\ .4 = (\operatorname{arcCos}(\sqrt{2}) = \mathit{undefined}) & .5 = \left(\operatorname{arcTan}(\sqrt{3}) = \frac{\pi}{3}\right) & .6 = \left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\operatorname{arcCos}(0) = \frac{\pi}{2}\right) & .8 = \left(\operatorname{arcSin}(1) = \frac{\pi}{2}\right) & .9 = \left(\operatorname{arcSin}\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\operatorname{Tan}(\operatorname{arcTan}(-1)) = -1) & .2 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \sqrt{3}\right) \\ .4 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .5 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .6 = \left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{\pi}{4}\right)\right) = \frac{3\pi}{4}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\operatorname{Sec}\left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{2\sqrt{3}}{3}\right) & .11 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{7\pi}{6}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\operatorname{Sin}\left(\operatorname{ArcCos}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{3}{8}\right)\right) = \frac{3\sqrt{55}}{55}\right) & .2 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\frac{1}{6}\right)\right) = \sqrt{35}\right) & .3 = \left(\operatorname{Csc}\left(\operatorname{arcTan}\left(\frac{-5}{7}\right)\right) = -\frac{\sqrt{74}}{5}\right) \\ .4 = \left(\operatorname{Cos}\left(\operatorname{arcTan}\left(\frac{4}{7}\right)\right) = \frac{7\sqrt{65}}{65}\right) & .5 = \left(\operatorname{Cot}\left(\operatorname{arcSin}\left(\frac{-4}{5}\right)\right) = \frac{-3}{4}\right) & .6 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{2}\sqrt{3}}{9}\right) \\ .7 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) & .8 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) & .9 = \left(\operatorname{Sec}\left(\operatorname{arcCos}\left(-\frac{\sqrt{5}}{6}\right)\right) = -\frac{6\sqrt{5}}{5}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{2}{5}\right) + \operatorname{arcSin}\left(\frac{1}{3}\right)\right) = \frac{2\sqrt{2}\sqrt{21}}{15} + \frac{2}{15}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{3}{7}\right) + \operatorname{arcSin}\left(\frac{-1}{5}\right)\right) = \frac{6\sqrt{6}}{35} + \frac{2\sqrt{10}}{35}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcSin}\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\operatorname{arcSin}\left(\frac{1}{5}\right)\right) = \frac{23}{25}\right) \\ .5 = \left(\operatorname{arcTan}\left(\operatorname{Cos}\left(\frac{7\pi}{2}\right) + \operatorname{Sin}\left(-\frac{5\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{7\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.9899

$$Ans1 = \begin{bmatrix} .1 = \left(\operatorname{arcTan}(\sqrt{3}) = \frac{\pi}{3}\right) & .2 = (\operatorname{arcSin}(-3) = \mathit{undefined}) & .3 = \left(\operatorname{arcSin}\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) \\ .4 = (\operatorname{arcCos}(1) = 0) & .5 = \left(\operatorname{arcTan}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .6 = \left(\operatorname{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) \\ .7 = \left(\operatorname{arcCos}\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .8 = \left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .9 = (\operatorname{arcSin}(0) = 0) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) \\ .4 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{3}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(\frac{8\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(\frac{11\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \sqrt{2}\right) & .11 = \left(\operatorname{Cot}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{7\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\operatorname{Sin}\left(\operatorname{ArcCos}\left(\frac{-1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \ , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{1}{5}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .2 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(\frac{\sqrt{7}}{5}\right)\right) = \frac{\sqrt{7}\sqrt{2}}{8}\right) & .3 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\frac{-5}{9}\right)\right) = \frac{9\sqrt{14}}{28}\right) \\ .4 = \left(\operatorname{Cot}\left(\operatorname{arcSin}\left(\frac{-3}{4}\right)\right) = -\frac{\sqrt{7}}{3}\right) & .5 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\frac{5}{7}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .6 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(-\frac{\sqrt{7}}{8}\right)\right) = \frac{\sqrt{57}}{8}\right) \\ .7 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{2}\sqrt{47}}{47}\right) & .8 = \left(\operatorname{Cos}\left(\operatorname{arcTan}\left(\frac{5}{7}\right)\right) = \frac{7\sqrt{74}}{74}\right) & .9 = \left(\operatorname{Sec}\left(\operatorname{arcTan}\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{61}}{6}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{2}\right) + \operatorname{arcSin}\left(\frac{3}{8}\right)\right) = \frac{\sqrt{3}\sqrt{55}}{16} + \frac{3}{16}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{5}{7}\right) + \operatorname{arcSin}\left(\frac{-1}{5}\right)\right) = \frac{12\sqrt{6}}{35}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcSin}\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\operatorname{arcCos}\left(\frac{5}{8}\right)\right) = \frac{-7}{32}\right) \\ .5 = \left(\operatorname{arcTan}\left(\operatorname{Cos}\left(\frac{9\pi}{2}\right) + \operatorname{Sin}\left(\frac{7\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\operatorname{Sec}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{13\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.9920

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .2 = (\arctan(0) = 0) & .3 = \left(\arcsin(1) = \frac{\pi}{2}\right) \\ .4 = (\arccos(-1) = \pi) & .5 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .6 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) \\ .7 = (\arccos(\sqrt{3}) = \mathit{undefined}) & .8 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .9 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\sin\left(\arcsin\left(\frac{-1}{2}\right)\right) = \frac{-1}{2}\right) & .2 = \left(\sin(\arctan(\sqrt{3})) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\tan\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right) = \sqrt{3}\right) \\ .4 = \left(\cos\left(\arcsin\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .5 = \left(\arccos\left(\cos\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\arccos\left(\sin\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(\frac{4\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\arctan\left(\tan\left(\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arccos\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\cot\left(\arcsin\left(\cos\left(-\frac{2\pi}{3}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\mathrm{ArcCos}\left(\sin\left(\mathrm{ArcCos}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\cos\left(\arcsin\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{4}\right) & .2 = \left(\sec\left(\arccos\left(\frac{4}{5}\right)\right) = \frac{5}{4}\right) & .3 = \left(\cos\left(\arctan\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{4\sqrt{19}}{19}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{-3}{4}\right)\right) = -\frac{\sqrt{7}}{3}\right) & .5 = \left(\csc\left(\arcsin\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{4\sqrt{3}}{3}\right) & .6 = \left(\sin\left(\arccos\left(\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) \\ .7 = \left(\cot\left(\arctan\left(\frac{4}{5}\right)\right) = \frac{5}{4}\right) & .8 = \left(\sin(\arctan(-1)) = -\frac{\sqrt{2}}{2}\right) & .9 = \left(\tan\left(\arcsin\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{1}{3}\right)\right) = \frac{2\sqrt{2}}{5} + \frac{4}{15}\right) & .2 = \left(\cos\left(\arccos\left(\frac{2}{3}\right) + \arcsin\left(\frac{-3}{5}\right)\right) = \frac{8}{15} + \frac{\sqrt{5}}{5}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\arctan(\cos(2\pi) + \sin(\pi)) = \frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(-\frac{17\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{7\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.10000

$$Ans1 = \begin{bmatrix} .1 = (\arctan(0) = 0) & .2 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .3 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) \\ .4 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .5 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .6 = (\arccos(5) = \mathit{undefined}) \\ .7 = \left(\arccos(0) = \frac{\pi}{2}\right) & .8 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .9 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\sin\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\tan\left(\arcsin\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .3 = \left(\sin\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) \\ .4 = \left(\cos\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\arcsin\left(\sin\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\arccos\left(\sin\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\arctan\left(\tan\left(\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\sec\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\cot\left(\arccos\left(\sin\left(\frac{5\pi}{6}\right)\right)\right) = \frac{\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\cos\left(\mathrm{ArcSin}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\sec\left(\arcsin\left(\frac{1}{6}\right)\right) = \frac{6\sqrt{35}}{35}\right) & .2 = \left(\cos(\arctan(-6)) = \frac{\sqrt{37}}{37}\right) & .3 = \left(\sin\left(\arccos\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) \\ .4 = \left(\sin\left(\arctan\left(\frac{2}{3}\right)\right) = \frac{2\sqrt{13}}{13}\right) & .5 = \left(\tan\left(\arccos\left(\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}\sqrt{3}}{3}\right) & .6 = \left(\csc\left(\arctan\left(\frac{\sqrt{5}}{2}\right)\right) = \frac{3\sqrt{5}}{5}\right) \\ .7 = \left(\cot\left(\arccos\left(\frac{-1}{6}\right)\right) = -\frac{\sqrt{35}}{35}\right) & .8 = \left(\tan\left(\arcsin\left(\frac{-3}{4}\right)\right) = -\frac{3\sqrt{7}}{7}\right) & .9 = \left(\cos\left(\arcsin\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{59}}{8}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-5}{8}\right)\right) = \frac{\sqrt{3}\sqrt{39}}{16} - \frac{5}{16}\right) & .2 = \left(\cos\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{3}{7}\right)\right) = \frac{8\sqrt{10}}{35} - \frac{9}{35}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{3}{8}\right)\right) = \frac{3\sqrt{55}}{32}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{5}{9}\right)\right) = \frac{31}{81}\right) \\ .5 = \left(\arctan\left(\cos(9\pi) + \sin\left(\frac{17\pi}{2}\right)\right) = 0\right) & .6 = \left(\cot\left(\arccos\left(\sin\left(-\frac{17\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10017

$$Ans1 = \begin{bmatrix} .1 = \left(\arctan(1) = \frac{\pi}{4}\right) & .2 = (\arccos(-1) = \pi) & .3 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \\ .4 = (\arccos(7) = undefined) & .5 = \left(\arcsin(1) = \frac{\pi}{2}\right) & .6 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) \\ .7 = \left(\arcsin\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .8 = \left(\arcsin\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) & .9 = \left(\arccos\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\tan(\arctan(\sqrt{3})) = \sqrt{3}) & .2 = \left(\cos\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\sin\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{-1}{2}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{1}{2}\right)\right) = \sqrt{3}\right) & .5 = \left(\arcsin\left(\sin\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .6 = \left(\arccos\left(\sin\left(-\frac{\pi}{6}\right)\right) = \frac{2\pi}{3}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(\frac{10\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\arctan\left(\tan\left(-\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\sec\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right) = 2\right) & .11 = \left(\tan\left(\arccos\left(\sin\left(\frac{11\pi}{6}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\sin\left(\operatorname{ArcCos}\left(-\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \; , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) & .2 = \left(\tan\left(\arccos\left(\frac{-5}{8}\right)\right) = -\frac{\sqrt{39}}{5}\right) & .3 = \left(\sec\left(\arccos\left(-\frac{\sqrt{3}}{7}\right)\right) = -\frac{7\sqrt{3}}{3}\right) \\ .4 = \left(\tan\left(\arcsin\left(\frac{-5}{6}\right)\right) = -\frac{5\sqrt{11}}{11}\right) & .5 = \left(\csc\left(\arcsin\left(\frac{5}{8}\right)\right) = \frac{8}{5}\right) & .6 = \left(\sin\left(\arctan\left(\frac{2}{5}\right)\right) = \frac{2\sqrt{29}}{29}\right) \\ .7 = \left(\cot\left(\arctan\left(\frac{-1}{3}\right)\right) = -3\right) & .8 = \left(\cos\left(\arcsin\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) & .9 = \left(\cos\left(\arctan\left(\frac{\sqrt{5}}{3}\right)\right) = \frac{3\sqrt{14}}{14}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{1}{2}\right)\right) = 1\right) & .2 = \left(\cos\left(\arccos\left(\frac{3}{8}\right) + \arcsin\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}}{4} + \frac{\sqrt{55}}{24}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan(\cos(\pi) + \sin(5\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(-\frac{5\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{13\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \; , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \; , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10025

$$Ans1 = \begin{bmatrix} .1 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .2 = \left(\arctan\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .3 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \\ .4 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .5 = \left(\arcsin\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) & .6 = \left(\arctan(\sqrt{3}) = \frac{\pi}{3}\right) \\ .7 = (\arccos(-2) = undefined) & .8 = (\arcsin(0) = 0) & .9 = (\arccos(-1) = \pi) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\tan\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{3}\right) & .2 = \left(\tan\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{3}\right) & .3 = \left(\cos\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \\ .4 = \left(\sin\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .5 = \left(\arcsin\left(\sin\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .6 = \left(\arcsin\left(\cos\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{11\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\arctan\left(\tan\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = -2\right) & .11 = \left(\cot\left(\arcsin\left(\cos\left(\frac{13\pi}{3}\right)\right)\right) = \sqrt{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\sin\left(\operatorname{ArcCos}\left(\frac{-1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \; , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\sin\left(\arctan\left(\frac{7}{6}\right)\right) = \frac{7\sqrt{85}}{85}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\tan\left(\arccos\left(\frac{4}{5}\right)\right) = \frac{3}{4}\right) \\ .4 = \left(\sin\left(\arccos\left(-\frac{\sqrt{5}}{6}\right)\right) = \frac{\sqrt{31}}{6}\right) & .5 = \left(\cot\left(\arccos\left(\frac{-3}{4}\right)\right) = -\frac{3\sqrt{7}}{7}\right) & .6 = \left(\csc\left(\arcsin\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{6\sqrt{5}}{5}\right) \\ .7 = \left(\sec\left(\arctan\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{2\sqrt{7}}{5}\right) & .8 = \left(\cos(\arctan(-7)) = \frac{\sqrt{2}}{10}\right) & .9 = \left(\tan\left(\arcsin\left(\frac{-4}{5}\right)\right) = \frac{-4}{3}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{5}\right) + \arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{6}\sqrt{7}}{10} + \frac{3}{20}\right) & .2 = \left(\cos\left(\arccos\left(\frac{3}{5}\right) + \arcsin\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{15} + \frac{4}{9}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{2}{7}\right)\right) = \frac{12\sqrt{5}}{49}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{5}\right)\right) = \frac{-7}{25}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{9\pi}{2}\right) + \sin\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(-\frac{17\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \; , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \; , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.10057

$$Ans1 = \begin{bmatrix} .1 = \left(\text{arcSin}(1) = \frac{\pi}{2}\right) & .2 = \left(\text{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .3 = \left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) \\ .4 = (\text{arcCos}(3) = \textit{undefined}) & .5 = (\text{arcCos}(-1) = \pi) & .6 = \left(\text{arcTan}(-\sqrt{3}) = -\frac{\pi}{3}\right) \\ .7 = (\text{arcTan}(0) = 0) & .8 = \left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .9 = \left(\text{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{-1}{2}\right) & .2 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \sqrt{3}\right) \\ .4 = \left(\text{Sin}(\text{arcTan}(-1)) = -\frac{\sqrt{2}}{2}\right) & .5 = \left(\text{arcSin}\left(\text{Sin}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{arcSin}\left(\text{Cos}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{3}\right) \\ .7 = \left(\text{arcSin}\left(\text{Sin}\left(\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\text{arcCos}\left(\text{Cos}\left(\frac{8\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\text{arcTan}\left(\text{Tan}\left(-\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\text{Sec}\left(\text{arcCos}\left(\frac{1}{2}\right)\right) = 2\right) & .11 = \left(\text{Tan}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{5\pi}{6}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\text{ArcCos}\left(\text{Sin}\left(\text{ArcCos}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Tan}\left(\text{arcSin}\left(-\frac{\sqrt{7}}{10}\right)\right) = -\frac{\sqrt{7}\sqrt{93}}{93}\right) & .2 = \left(\text{Sec}\left(\text{arcCos}\left(\frac{5}{7}\right)\right) = \frac{7}{5}\right) & .3 = \left(\text{Csc}\left(\text{arcTan}\left(\frac{-2}{5}\right)\right) = -\frac{\sqrt{29}}{2}\right) \\ .4 = \left(\text{Cot}\left(\text{arcSin}\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{4}\right) & .5 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{-4}{5}\right)\right) = \frac{3}{5}\right) & .6 = \left(\text{Tan}\left(\text{arcCos}\left(-\frac{\sqrt{2}}{3}\right)\right) = -\frac{\sqrt{7}\sqrt{2}}{2}\right) \\ .7 = \left(\text{Sin}\left(\text{arcTan}\left(-\frac{\sqrt{7}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{11}}{11}\right) & .8 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{7}{6}\right)\right) = \frac{6\sqrt{85}}{85}\right) & .9 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-1}{6}\right)\right) = \frac{\sqrt{35}}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{1}{2}\right)\right) = 1\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{5}{9}\right) + \text{arcSin}\left(\frac{-5}{9}\right)\right) = \frac{20\sqrt{14}}{81}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{8}\right) & .4 = \left(\text{cos}\left(2\,\text{arcSin}\left(\frac{1}{3}\right)\right) = \frac{7}{9}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}\left(\frac{7\pi}{2}\right) + \text{Sin}\left(\frac{\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\text{Cot}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\,\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10061

$$Ans1 = \begin{bmatrix} .1 = \left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .2 = (\text{arcCos}(1) = 0) & .3 = \left(\text{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) \\ .4 = \left(\text{arcSin}(-1) = -\frac{\pi}{2}\right) & .5 = \left(\text{arcCos}\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) & .6 = (\text{arcSin}(-\sqrt{3}) = \textit{undefined}) \\ .7 = \left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .8 = \left(\text{arcTan}(\sqrt{3}) = \frac{\pi}{3}\right) & .9 = \left(\text{arcTan}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\text{cos}\left(\text{arcCos}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) & .3 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) \\ .4 = \left(\text{Cos}(\text{arcTan}(-1)) = \frac{\sqrt{2}}{2}\right) & .5 = \left(\text{arcSin}\left(\text{Sin}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .6 = \left(\text{arcCos}\left(\text{Sin}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) \\ .7 = \left(\text{arcSin}\left(\text{Sin}\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\text{arcCos}\left(\text{Cos}\left(-\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .9 = \left(\text{arcTan}\left(\text{Tan}\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\text{Csc}\left(\text{arcTan}\left(\frac{\sqrt{3}}{3}\right)\right) = 2\right) & .11 = \left(\text{Cot}\left(\text{arcSin}\left(\text{Cos}\left(\frac{7\pi}{3}\right)\right)\right) = \sqrt{3}\right) & .12 = \left(\text{ArcCos}\left(\text{Sin}\left(\text{ArcCos}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{-4}{5}\right)\right) = \frac{-3}{4}\right) & .2 = \left(\text{Cos}\left(\text{arcSin}\left(-\frac{\sqrt{3}}{8}\right)\right) = \frac{\sqrt{61}}{8}\right) & .3 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{17}}{17}\right) \\ .4 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) & .5 = \left(\text{Csc}\left(\text{arcTan}\left(-\frac{\sqrt{3}}{5}\right)\right) = -\frac{2\sqrt{7}\sqrt{3}}{3}\right) & .6 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{3}{7}\right)\right) = \frac{7\sqrt{10}}{20}\right) \\ .7 = \left(\text{Cot}\left(\text{arcCos}\left(\frac{1}{5}\right)\right) = \frac{\sqrt{6}}{12}\right) & .8 = \left(\text{Cos}(\text{arcTan}(-5)) = \frac{\sqrt{26}}{26}\right) & .9 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{-2}{5}\right)\right) = -\frac{2\sqrt{21}}{21}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{3}{8}\right) + \text{arcSin}\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}\sqrt{55}}{12} - \frac{1}{8}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{3}{4}\right) + \text{arcSin}\left(\frac{5}{7}\right)\right) = \frac{3\sqrt{6}}{14} - \frac{5\sqrt{7}}{28}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\text{cos}\left(2\,\text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{1}{2}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(9\pi) + \text{Sin}\left(-\frac{19\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Csc}\left(\text{arcCos}\left(\text{Sin}\left(\frac{5\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\,\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10071

$$Ans1 = \begin{bmatrix} .1 = \left(\mathrm{arcCos}\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) & .2 = \left(\mathrm{arcSin}\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) & .3 = \left(\mathrm{arcCos}(0) = \frac{\pi}{2}\right) \\ .4 = \left(\mathrm{arcTan}\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .5 = \left(\mathrm{arcSin}(-1) = -\frac{\pi}{2}\right) & .6 = \left(\mathrm{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) \\ .7 = \left(\mathrm{arcSin}(-\sqrt{2}) = \mathit{undefined}\right) & .8 = \left(\mathrm{arcTan}(0) = 0\right) & .9 = \left(\mathrm{arcCos}\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\mathrm{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{1}{2}\right)\right) = \sqrt{3}\right) & .3 = \left(\mathrm{Cos}(\mathrm{arcTan}(-\sqrt{3})) = \frac{1}{2}\right) \\ .4 = \left(\mathrm{Sin}(\mathrm{arcTan}(\sqrt{3})) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{arcCos}\left(\mathrm{Sin}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\mathrm{arcSin}\left(\mathrm{Sin}\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\mathrm{arcCos}\left(\mathrm{Cos}\left(-\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .9 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Sec}(\mathrm{arcTan}(-1)) = \sqrt{2}\right) & .11 = \left(\mathrm{Csc}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(\frac{17\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \;, \begin{bmatrix} \frac{:)}{:(} \\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ \frac{:)}{:(} \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(-\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{13}}{4}\right) & .2 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{-1}{6}\right)\right) = -\frac{\sqrt{35}}{35}\right) \\ .4 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .5 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(\frac{7}{6}\right)\right) = \frac{6\sqrt{85}}{85}\right) & .6 = \left(\mathrm{Sec}\left(\mathrm{arcCos}\left(\frac{-3}{5}\right)\right) = \frac{-5}{3}\right) \\ .7 = \left(\mathrm{Cot}\left(\mathrm{arcSin}\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}\sqrt{2}}{2}\right) & .8 = \left(\mathrm{Csc}\left(\mathrm{arcTan}\left(\frac{-4}{5}\right)\right) = -\frac{\sqrt{41}}{4}\right) & .9 = \left(\mathrm{Sin}\left(\mathrm{arcTan}\left(\frac{\sqrt{7}}{3}\right)\right) = \frac{\sqrt{7}}{4}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{5}{7}\right) + \mathrm{arcSin}\left(\frac{-1}{4}\right)\right) = \frac{\sqrt{6}\sqrt{15}}{14} - \frac{5}{28}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcCos}\left(\frac{2}{3}\right) + \mathrm{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{3} - \frac{\sqrt{5}}{6}\right) \\ .3 = \left(\mathrm{Sin}\left(2\,\mathrm{arcCos}\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2\,\mathrm{arcCos}\left(\frac{4}{5}\right)\right) = \frac{7}{25}\right) \\ .5 = \left(\mathrm{arcTan}\left(\mathrm{Cos}(9\pi) + \mathrm{Sin}\left(-\frac{19\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Sec}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) + \mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \;, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \;, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10088

$$Ans1 = \begin{bmatrix} .1 = \left(\mathrm{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .2 = \left(\mathrm{arcTan}\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .3 = \left(\mathrm{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \\ .4 = \left(\mathrm{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .5 = \left(\mathrm{arcSin}(-1) = -\frac{\pi}{2}\right) & .6 = \left(\mathrm{arcTan}(0) = 0\right) \\ .7 = \left(\mathrm{arcCos}(1) = 0\right) & .8 = \left(\mathrm{arcCos}\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) & .9 = \left(\mathrm{arcCos}(\sqrt{2}) = \mathit{undefined}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\mathrm{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = -\frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{arcCos}\left(\mathrm{Sin}\left(-\frac{\pi}{6}\right)\right) = \frac{2\pi}{3}\right) \\ .7 = \left(\mathrm{arcSin}\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\mathrm{arcCos}\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Cot}(\mathrm{arcTan}(\sqrt{3})) = \frac{\sqrt{3}}{3}\right) & .11 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \;, \begin{bmatrix} \frac{:)}{:(} \\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ \frac{:)}{:(} \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(\frac{-1}{3}\right)\right) = \frac{3\sqrt{10}}{10}\right) & .3 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{-5}{7}\right)\right) = -\frac{2\sqrt{6}}{5}\right) \\ .4 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{5}{7}\right)\right) = \frac{5\sqrt{6}}{12}\right) & .5 = \left(\mathrm{Cot}\left(\mathrm{arcSin}\left(-\frac{\sqrt{7}}{9}\right)\right) = -\frac{\sqrt{7}\sqrt{74}}{7}\right) & .6 = \left(\mathrm{Sin}\left(\mathrm{arcTan}\left(\frac{5}{4}\right)\right) = \frac{5\sqrt{41}}{41}\right) \\ .7 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .8 = \left(\mathrm{Csc}\left(\mathrm{arcTan}\left(-\frac{\sqrt{6}}{7}\right)\right) = -\frac{\sqrt{55}\sqrt{6}}{6}\right) & .9 = \left(\mathrm{Sec}\left(\mathrm{arcCos}\left(-\frac{\sqrt{5}}{7}\right)\right) = -\frac{7\sqrt{5}}{5}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{4}{7}\right) + \mathrm{arcSin}\left(\frac{-4}{7}\right)\right) = \frac{17}{49}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcCos}\left(\frac{4}{5}\right) + \mathrm{arcSin}\left(\frac{3}{5}\right)\right) = \frac{7}{25}\right) \\ .3 = \left(\mathrm{Sin}\left(2\,\mathrm{arcSin}\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2\,\mathrm{arcSin}\left(\frac{1}{2}\right)\right) = \frac{1}{2}\right) \\ .5 = \left(\mathrm{arcTan}\left(\mathrm{Cos}(4\pi) + \mathrm{Sin}\left(-\frac{\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Cot}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(\frac{17\pi}{6}\right)\right) + \mathrm{arcSin}\left(\mathrm{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, \;, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \;, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \;, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.10385

$$Ans1 = \left[\begin{array}{ccc} .1 = (\mathrm{arcCos}(-7) = undefined) & .2 = \left(\mathrm{arcCos}(0) = \frac{\pi}{2}\right) & .3 = \left(\mathrm{arcTan}\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) \\ .4 = \left(\mathrm{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .5 = \left(\mathrm{arcCos}\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .6 = \left(\mathrm{arcTan}(-\sqrt{3}) = -\frac{\pi}{3}\right) \\ .7 = \left(\mathrm{arcSin}\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .8 = \left(\mathrm{arcSin}(1) = \frac{\pi}{2}\right) & .9 = \left(\mathrm{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans2 = \left[\begin{array}{ccc} .1 = \left(\mathrm{Sin}\left(\mathrm{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = -\frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) & .3 = \left(\mathrm{Sin}\left(\mathrm{arcTan}\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{-1}{2}\right) \\ .4 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .6 = \left(\mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{3}\right) \\ .7 = \left(\mathrm{arcSin}\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\mathrm{arcCos}\left(\mathrm{Cos}\left(-\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .9 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Csc}\left(\mathrm{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\mathrm{Cot}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(\frac{11\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{array}\right], \quad , \left[\begin{array}{c} :) \\ :(\\ \left[\left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]\right] \\ :) \\ :(\end{array}\right]$$

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(-\frac{\sqrt{3}}{4}\right)\right) = \frac{4\sqrt{19}}{19}\right) & .2 = \left(\mathrm{Csc}\left(\mathrm{arcCos}\left(\frac{-5}{9}\right)\right) = \frac{9\sqrt{14}}{28}\right) & .3 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{13}\sqrt{3}}{3}\right) \\ .4 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\mathrm{Cot}\left(\mathrm{arcTan}\left(\frac{7}{4}\right)\right) = \frac{4}{7}\right) & .6 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{\sqrt{3}}{8}\right)\right) = \frac{\sqrt{3}\sqrt{61}}{61}\right) \\ .7 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{3}{5}\right)\right) = \frac{4}{5}\right) & .8 = \left(\mathrm{Sec}\left(\mathrm{arcSin}\left(\frac{-2}{7}\right)\right) = \frac{7\sqrt{5}}{15}\right) & .9 = \left(\mathrm{Sin}(\mathrm{arcTan}(-2)) = -\frac{2\sqrt{5}}{5}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{5}{6}\right) + \mathrm{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{11}\sqrt{3}}{12} + \frac{5}{12}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcCos}\left(\frac{1}{3}\right) + \mathrm{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{6} + \frac{\sqrt{2}}{3}\right) \\ .3 = \left(\mathrm{Sin}\left(2\,\mathrm{arcSin}\left(\frac{5}{6}\right)\right) = \frac{5\sqrt{11}}{18}\right) & .4 = \left(\cos\left(2\,\mathrm{arcSin}\left(\frac{1}{3}\right)\right) = \frac{7}{9}\right) \\ .5 = \left(\mathrm{arcTan}\left(\mathrm{Cos}(6\pi) + \mathrm{Sin}\left(-\frac{13\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Cot}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right) + \mathrm{arcSin}\left(\mathrm{Cos}\left(-\frac{\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \left[\begin{array}{c} M \\ U \\ T \end{array}\right]$$

$$Ans6 = 2\alpha^2 - 1, \quad , \left[\begin{array}{c} M \\ U \\ T \end{array}\right]$$

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TrigonometryExercise5 Answers for No.10387

$$Ans1 = \left[\begin{array}{ccc} .1 = \left(\mathrm{arcTan}(-1) = -\frac{\pi}{4}\right) & .2 = \left(\mathrm{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .3 = \left(\mathrm{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \\ .4 = \left(\mathrm{arcSin}(-1) = -\frac{\pi}{2}\right) & .5 = \left(\mathrm{arcSin}\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .6 = \left(\mathrm{arcTan}\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\mathrm{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .8 = (\mathrm{arcCos}(-2) = undefined) & .9 = \left(\mathrm{arcCos}(0) = \frac{\pi}{2}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans2 = \left[\begin{array}{ccc} .1 = \left(\cos\left(\mathrm{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \\ .4 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) & .5 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\mathrm{arcSin}\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\mathrm{arcCos}\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .9 = \left(\mathrm{arcTan}\left(\mathrm{Tan}\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = (\mathrm{Cot}(\mathrm{arcTan}(1)) = 1) & .11 = \left(\mathrm{Sec}\left(\mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{11\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{array}\right], \quad , \left[\begin{array}{c} :) \\ :(\\ \left[\left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]\right] \\ :) \\ :(\end{array}\right]$$

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\mathrm{Cot}\left(\mathrm{arcTan}\left(\frac{\sqrt{6}}{7}\right)\right) = \frac{7\sqrt{6}}{6}\right) & .2 = \left(\mathrm{Sin}\left(\mathrm{arcTan}\left(\frac{-7}{6}\right)\right) = -\frac{7\sqrt{85}}{85}\right) & .3 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{5}}{5}\right) \\ .4 = \left(\mathrm{Sec}\left(\mathrm{arcSin}\left(-\frac{\sqrt{3}}{7}\right)\right) = \frac{7\sqrt{46}}{46}\right) & .5 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{1}{6}\right)\right) = \frac{\sqrt{35}}{35}\right) & .6 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{5}}{7}\right) \\ .7 = \left(\mathrm{Csc}\left(\mathrm{arcCos}\left(\frac{1}{4}\right)\right) = \frac{4\sqrt{15}}{15}\right) & .8 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{-4}{5}\right)\right) = \frac{3}{5}\right) & .9 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{23}\sqrt{2}}{2}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{1}{2}\right) + \mathrm{arcSin}\left(\frac{2}{7}\right)\right) = \frac{3\sqrt{3}\sqrt{5}}{14} + \frac{1}{7}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcCos}\left(\frac{2}{7}\right) + \mathrm{arcSin}\left(\frac{-2}{5}\right)\right) = \frac{2\sqrt{21}}{35} + \frac{6\sqrt{5}}{35}\right) \\ .3 = \left(\mathrm{Sin}\left(2\,\mathrm{arcCos}\left(\frac{1}{6}\right)\right) = \frac{\sqrt{35}}{18}\right) & .4 = \left(\cos\left(2\,\mathrm{arcSin}\left(\frac{1}{3}\right)\right) = \frac{7}{9}\right) \\ .5 = \left(\mathrm{arcTan}\left(\mathrm{Cos}\left(\frac{5\pi}{2}\right) + \mathrm{Sin}\left(\frac{3\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Cot}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(-\frac{17\pi}{6}\right)\right) + \mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{13\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{array}\right], \quad , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \left[\begin{array}{c} M \\ U \\ T \end{array}\right]$$

$$Ans6 = 2\alpha^2 - 1, \quad , \left[\begin{array}{c} M \\ U \\ T \end{array}\right]$$

TrigonometryExercise5 Answers for No.10914

$$Ans1 = \begin{bmatrix} .1 = (\operatorname{arcCos}(-1) = \pi) & .2 = \left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .3 = \left(\operatorname{arcSin}(1) = \frac{\pi}{2}\right) \\ .4 = (\operatorname{arcCos}(-7) = undefined) & .5 = \left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .6 = \left(\operatorname{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) & .8 = \left(\operatorname{arcTan}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .9 = \left(\operatorname{arcTan}(1) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\operatorname{Tan}(\operatorname{arcTan}(-1)) = -1) & .2 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .3 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(-\frac{\sqrt{3}}{2}\right)\right) = -\sqrt{3}\right) \\ .4 = \left(\operatorname{Cos}(\operatorname{arcTan}(\sqrt{3})) = \frac{1}{2}\right) & .5 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(-\frac{\pi}{3}\right)\right) = -\frac{\pi}{3}\right) & .6 = \left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{\pi}{4}\right)\right) = \frac{3\pi}{4}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(\frac{5\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = (\operatorname{Sec}(\operatorname{arcTan}(1)) = \sqrt{2}) & .11 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\operatorname{Cos}\left(-\frac{5\pi}{6}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\operatorname{Sin}\left(\operatorname{ArcCos}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} :) \\ :(\\ \left[\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\frac{-1}{6}\right)\right) = -\sqrt{35}\right) & .2 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\frac{5}{7}\right)\right) = \frac{7\sqrt{6}}{12}\right) & .3 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) \\ .4 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(\frac{1}{7}\right)\right) = \frac{\sqrt{2}}{10}\right) & .5 = \left(\operatorname{Cot}\left(\operatorname{arcTan}\left(-\frac{\sqrt{6}}{5}\right)\right) = -\frac{5\sqrt{6}}{6}\right) & .6 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(-\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) \\ .7 = \left(\operatorname{Cos}\left(\operatorname{arcTan}\left(\frac{-2}{7}\right)\right) = \frac{7\sqrt{53}}{53}\right) & .8 = \left(\operatorname{Sec}\left(\operatorname{arcSin}\left(\frac{4}{5}\right)\right) = \frac{5}{3}\right) & .9 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{-2}{3}\right)\right) = -\frac{2\sqrt{5}}{5}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{2}\right) + \operatorname{arcSin}\left(\frac{-5}{7}\right)\right) = \frac{\sqrt{3}\sqrt{6}}{7} - \frac{5}{14}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{4}{7}\right) + \operatorname{arcSin}\left(\frac{5}{7}\right)\right) = \frac{8\sqrt{6}}{49} - \frac{5\sqrt{33}}{49}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcCos}\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\operatorname{arcCos}\left(\frac{3}{7}\right)\right) = \frac{-31}{49}\right) \\ .5 = \left(\operatorname{arcTan}(\operatorname{Cos}(2\pi) + \operatorname{Sin}(-\pi)) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{Cot}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{13\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{13\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\,\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.10945

$$Ans1 = \begin{bmatrix} .1 = (\operatorname{arcTan}(0) = 0) & .2 = \left(\operatorname{arcTan}\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .3 = (\operatorname{arcCos}(1) = 0) \\ .4 = \left(\operatorname{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .5 = \left(\operatorname{arcCos}\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) & .6 = (\operatorname{arcSin}(0) = 0) \\ .7 = \left(\operatorname{arcSin}\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .9 = (\operatorname{arcCos}(-5) = undefined) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\operatorname{Sin}(\operatorname{arcTan}(\sqrt{3})) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\operatorname{Cos}(\operatorname{arcTan}(-\sqrt{3})) = \frac{1}{2}\right) \\ .4 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) & .5 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(\frac{5\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\operatorname{Cot}\left(\operatorname{arcCos}\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) & .11 = \left(\operatorname{Sec}\left(\operatorname{arcSin}\left(\operatorname{Cos}\left(-\frac{5\pi}{6}\right)\right)\right) = 2\right) & .12 = \left(\operatorname{ArcCos}\left(\operatorname{Sin}\left(\operatorname{ArcCos}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \begin{bmatrix} :) \\ :(\\ \left[\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Csc}\left(\operatorname{arcSin}\left(\frac{-3}{8}\right)\right) = \frac{-8}{3}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcTan}\left(\frac{-3}{2}\right)\right) = \frac{2\sqrt{13}}{13}\right) & .3 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) \\ .4 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(-\frac{\sqrt{5}}{6}\right)\right) = -\frac{\sqrt{5}\sqrt{31}}{31}\right) & .5 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) & .6 = \left(\operatorname{Sec}\left(\operatorname{arcTan}\left(\frac{4}{7}\right)\right) = \frac{\sqrt{65}}{7}\right) \\ .7 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(-\frac{\sqrt{5}}{6}\right)\right) = -\frac{\sqrt{5}\sqrt{41}}{41}\right) & .8 = \left(\operatorname{Cot}\left(\operatorname{arcCos}\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{23}\sqrt{2}}{23}\right) & .9 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\frac{-4}{9}\right)\right) = -\frac{\sqrt{65}}{4}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{3}\right) + \operatorname{arcSin}\left(\frac{-3}{7}\right)\right) = \frac{4\sqrt{2}\sqrt{10}}{21} - \frac{1}{7}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{1}{4}\right) + \operatorname{arcSin}\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{24} - \frac{5\sqrt{15}}{24}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcSin}\left(\frac{5}{9}\right)\right) = \frac{20\sqrt{14}}{81}\right) & .4 = \left(\cos\left(2\operatorname{arcCos}\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\operatorname{arcTan}\left(\operatorname{Cos}(6\pi) + \operatorname{Sin}\left(-\frac{13\pi}{2}\right)\right) = 0\right) & .6 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{11\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\,\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.10954

$$Ans1 = \begin{bmatrix} .1 = \left(\text{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .2 = \left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .3 = \left(\text{arcCos}(0) = \frac{\pi}{2}\right) \\ .4 = (\text{arcTan}(0) = 0) & .5 = \left(\text{arcTan}(-\sqrt{3}) = -\frac{\pi}{3}\right) & .6 = \left(\text{arcSin}(-1) = -\frac{\pi}{2}\right) \\ .7 = \left(\text{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .8 = (\text{arcCos}(\sqrt{3}) = \textit{undefined}) & .9 = \left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\text{Tan}(\text{arcTan}(\sqrt{3})) = \sqrt{3}) & .2 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\text{Tan}\left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) \\ .4 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{1}{2}\right) & .5 = \left(\text{arcSin}\left(\text{Sin}\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{arcCos}\left(\text{Sin}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{3}\right) \\ .7 = \left(\text{arcSin}\left(\text{Sin}\left(\frac{11\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\text{arcCos}\left(\text{Cos}\left(\frac{4\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\text{arcTan}\left(\text{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = (\text{Sec}(\text{arcTan}(-1)) = \sqrt{2}) & .11 = \left(\text{Cot}\left(\text{arcSin}\left(\text{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = -\sqrt{3}\right) & .12 = \left(\text{ArcSin}\left(\text{Cos}\left(\text{ArcSin}\left(\frac{-1}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) & .2 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{5}}{5}\right) & .3 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{4}{7}\right)\right) = \frac{4\sqrt{33}}{33}\right) \\ .4 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{13}\sqrt{3}}{3}\right) & .5 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .6 = \left(\text{Csc}\left(\text{arcSin}\left(\frac{-3}{7}\right)\right) = \frac{-7}{3}\right) \\ .7 = \left(\text{Sin}\left(\text{arcTan}\left(-\frac{\sqrt{7}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{11}}{11}\right) & .8 = \left(\text{Cot}\left(\text{arcTan}\left(\frac{-2}{3}\right)\right) = \frac{-3}{2}\right) & .9 = \left(\text{Sec}\left(\text{arcCos}\left(\frac{-2}{7}\right)\right) = \frac{-7}{2}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{2}{3}\right)\right) = \frac{\sqrt{3}\sqrt{5}}{6} + \frac{1}{3}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{-5}{7}\right)\right) = \frac{5\sqrt{3}}{14} + \frac{\sqrt{6}}{7}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{2}{7}\right)\right) = \frac{12\sqrt{5}}{49}\right) & .4 = \left(\cos\left(2\,\text{arcSin}\left(\frac{2}{7}\right)\right) = \frac{41}{49}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(7\pi) + \text{Sin}\left(\frac{21\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Cot}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{13\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{11\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\,\alpha^2 - 1, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.10966

$$Ans1 = \begin{bmatrix} .1 = \left(\text{arcCos}\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .2 = \left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .3 = (\text{arcCos}(3) = \textit{undefined}) \\ .4 = \left(\text{arcTan}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) & .5 = \left(\text{arcSin}(1) = \frac{\pi}{2}\right) & .6 = \left(\text{arcCos}\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) \\ .7 = (\text{arcTan}(0) = 0) & .8 = (\text{arcCos}(-1) = \pi) & .9 = \left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\text{Tan}\left(\text{arcTan}\left(-\frac{\sqrt{3}}{3}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .2 = \left(\text{Cos}(\text{arcTan}(\sqrt{3})) = \frac{1}{2}\right) & .3 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \sqrt{3}\right) & .5 = \left(\text{arcCos}\left(\text{Cos}\left(\frac{3\pi}{4}\right)\right) = \frac{3\pi}{4}\right) & .6 = \left(\text{arcCos}\left(\text{Sin}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\text{arcSin}\left(\text{Sin}\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\text{arcCos}\left(\text{Cos}\left(\frac{7\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\text{arcTan}\left(\text{Tan}\left(\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = \sqrt{2}\right) & .11 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(\frac{7\pi}{6}\right)\right)\right) = -2\right) & .12 = \left(\text{ArcSin}\left(\text{Cos}\left(\text{ArcSin}\left(\frac{1}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Csc}\left(\text{arcCos}\left(\frac{3}{5}\right)\right) = \frac{5}{4}\right) & .2 = \left(\text{Sin}\left(\text{arcCos}\left(-\frac{\sqrt{5}}{7}\right)\right) = \frac{2\sqrt{11}}{7}\right) & .3 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{2}{7}\right)\right) = \frac{2\sqrt{5}}{15}\right) \\ .4 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{4}{3}\right)\right) = \frac{4}{5}\right) & .5 = \left(\text{Cot}\left(\text{arcSin}\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{59}\sqrt{5}}{5}\right) & .6 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{-5}{8}\right)\right) = \frac{\sqrt{39}}{8}\right) \\ .7 = \left(\text{Cos}\left(\text{arcTan}\left(-\frac{\sqrt{2}}{5}\right)\right) = \frac{5\sqrt{3}}{9}\right) & .8 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{-1}{2}\right)\right) = -\sqrt{3}\right) & .9 = \left(\text{Sec}\left(\text{arcTan}\left(\frac{-6}{7}\right)\right) = \frac{\sqrt{85}}{7}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{3}{7}\right) + \text{arcSin}\left(\frac{2}{3}\right)\right) = \frac{2\sqrt{5}\sqrt{10}}{21} + \frac{2}{7}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{3}{8}\right) + \text{arcSin}\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{8} + \frac{\sqrt{55}}{12}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\,\text{arcSin}\left(\frac{1}{5}\right)\right) = \frac{23}{25}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}\left(\frac{\pi}{2}\right) + \text{Sin}\left(-\frac{5\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(\frac{17\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\,\alpha^2 - 1, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.11154

$$Ans1 = \begin{bmatrix} .1 = \left(\operatorname{arcSin}(-1) = -\frac{\pi}{2}\right) & .2 = \left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) & .3 = \left(\operatorname{arcCos}(-\sqrt{3}) = \mathit{undefined}\right) \\ .4 = \left(\operatorname{arcTan}(-\sqrt{3}) = -\frac{\pi}{3}\right) & .5 = \left(\operatorname{arcTan}(1) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{arcCos}(0) = \frac{\pi}{2}\right) \\ .7 = \left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .8 = \left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .9 = \left(\operatorname{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\operatorname{Cos}(\operatorname{arcTan}(1)) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(-\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) \\ .4 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .5 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(\frac{3\pi}{4}\right)\right) = \frac{3\pi}{4}\right) & .6 = \left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(-\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\operatorname{Sec}\left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = \sqrt{2}\right) & .11 = \left(\operatorname{Cot}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{13\pi}{6}\right)\right)\right) = \frac{\sqrt{3}}{3}\right) & .12 = \left(\operatorname{ArcCos}\left(\operatorname{Sin}\left(\operatorname{ArcCos}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(\frac{1}{5}\right)\right) = 2\sqrt{6}\right) & .2 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\frac{-1}{4}\right)\right) = \frac{4\sqrt{15}}{15}\right) & .3 = \left(\operatorname{Cos}\left(\operatorname{arcTan}\left(\frac{3}{4}\right)\right) = \frac{4}{5}\right) \\ .4 = \left(\operatorname{Cot}\left(\operatorname{arcSin}\left(\frac{\sqrt{5}}{7}\right)\right) = \frac{2\sqrt{5}\sqrt{11}}{5}\right) & .5 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{-4}{7}\right)\right) = -\frac{4\sqrt{33}}{33}\right) & .6 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}}{5}\right) \\ .7 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(\frac{-2}{5}\right)\right) = -\frac{2\sqrt{29}}{29}\right) & .8 = \left(\operatorname{Sec}\left(\operatorname{arcTan}\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{2\sqrt{7}}{5}\right) & .9 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{1}{5}\right)\right) = \frac{2\sqrt{6}}{5}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{2}\right) + \operatorname{arcSin}\left(\frac{-5}{9}\right)\right) = \frac{\sqrt{3}\sqrt{14}}{9} - \frac{5}{18}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{1}{2}\right) + \operatorname{arcSin}\left(\frac{3}{7}\right)\right) = \frac{\sqrt{10}}{7} - \frac{3\sqrt{3}}{14}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcCos}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{8}\right) & .4 = \left(\cos\left(2\operatorname{arcSin}\left(\frac{1}{5}\right)\right) = \frac{23}{25}\right) \\ .5 = \left(\operatorname{arcTan}\left(\operatorname{Cos}\left(\frac{\pi}{2}\right) + \operatorname{Sin}\left(\frac{5\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(\frac{7\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{7\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\,\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.11191

$$Ans1 = \begin{bmatrix} .1 = \left(\operatorname{arcTan}(\sqrt{3}) = \frac{\pi}{3}\right) & .2 = \left(\operatorname{arcTan}(-1) = -\frac{\pi}{4}\right) & .3 = \left(\operatorname{arcCos}\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) \\ .4 = \left(\operatorname{arcCos}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) & .5 = \left(\operatorname{arcSin}(-\sqrt{2}) = \mathit{undefined}\right) & .6 = \left(\operatorname{arcCos}(1) = 0\right) \\ .7 = \left(\operatorname{arcSin}(-1) = -\frac{\pi}{2}\right) & .8 = \left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .9 = \left(\operatorname{arcSin}\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\operatorname{Tan}(\operatorname{arcTan}(-\sqrt{3})) = -\sqrt{3}\right) & .2 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .3 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) \\ .4 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .5 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{arcSin}\left(\operatorname{Cos}\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\operatorname{arcSin}\left(\operatorname{Sin}\left(-\frac{17\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\operatorname{arcCos}\left(\operatorname{Cos}\left(-\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .9 = \left(\operatorname{arcTan}\left(\operatorname{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\operatorname{Cot}\left(\operatorname{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) & .11 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{5\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\operatorname{ArcSin}\left(\operatorname{Cos}\left(\operatorname{ArcSin}\left(-\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Cos}(\operatorname{arcTan}(-\sqrt{5})) = \frac{\sqrt{6}}{6}\right) & .2 = \left(\operatorname{Sec}\left(\operatorname{arcTan}\left(\frac{-1}{5}\right)\right) = \frac{\sqrt{26}}{5}\right) & .3 = \left(\operatorname{Sin}\left(\operatorname{arcTan}\left(\frac{3}{2}\right)\right) = \frac{3\sqrt{13}}{13}\right) \\ .4 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{8}\right) & .5 = \left(\operatorname{Csc}\left(\operatorname{arcCos}\left(\frac{-2}{3}\right)\right) = \frac{3\sqrt{5}}{5}\right) & .6 = \left(\operatorname{Cos}\left(\operatorname{arcSin}\left(\frac{-5}{8}\right)\right) = \frac{\sqrt{39}}{8}\right) \\ .7 = \left(\operatorname{Tan}\left(\operatorname{arcCos}\left(-\frac{\sqrt{3}}{8}\right)\right) = -\frac{\sqrt{3}\sqrt{61}}{3}\right) & .8 = \left(\operatorname{Cot}\left(\operatorname{arcSin}\left(-\frac{\sqrt{5}}{9}\right)\right) = -\frac{2\sqrt{19}\sqrt{5}}{5}\right) & .9 = \left(\operatorname{Tan}\left(\operatorname{arcSin}\left(\frac{5}{7}\right)\right) = \frac{5\sqrt{6}}{12}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\operatorname{arcCos}\left(\frac{1}{2}\right) + \operatorname{arcSin}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{3}\sqrt{15}}{8} + \frac{1}{8}\right) & .2 = \left(\operatorname{Cos}\left(\operatorname{arcCos}\left(\frac{1}{3}\right) + \operatorname{arcSin}\left(\frac{-1}{6}\right)\right) = \frac{\sqrt{35}}{18} + \frac{\sqrt{2}}{9}\right) \\ .3 = \left(\operatorname{Sin}\left(2\operatorname{arcSin}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{8}\right) & .4 = \left(\cos\left(2\operatorname{arcCos}\left(\frac{3}{4}\right)\right) = \frac{1}{8}\right) \\ .5 = \left(\operatorname{arcTan}\left(\operatorname{Cos}\left(\frac{\pi}{2}\right) + \operatorname{Sin}\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{Sec}\left(\operatorname{arcCos}\left(\operatorname{Sin}\left(-\frac{13\pi}{6}\right)\right) + \operatorname{arcSin}\left(\operatorname{Cos}\left(-\frac{\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\,\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\,\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.11309

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) & .2 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .3 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \\ .4 = (\arccos(1) = 0) & .5 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .6 = (\arcsin(0) = 0) \\ .7 = (\arctan(0) = 0) & .8 = (\arcsin(\sqrt{3}) = \textit{undefined}) & .9 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\sin\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .3 = \left(\cos(\arctan(-\sqrt{3})) = \frac{1}{2}\right) \\ .4 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) & .5 = \left(\arcsin\left(\sin\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .6 = \left(\arccos\left(\sin\left(\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) \\ .7 = \left(\arcsin\left(\sin\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{3\pi}{4}\right)\right) = \frac{3\pi}{4}\right) & .9 = \left(\arctan\left(\tan\left(\frac{17\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\sec\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\sec\left(\arccos\left(\sin\left(\frac{13\pi}{6}\right)\right)\right) = 2\right) & .12 = \left(\arccos\left(\sin\left(\arccos\left(\frac{1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\tan\left(\arccos\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{2}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .3 = \left(\cos\left(\arctan\left(\frac{\sqrt{7}}{4}\right)\right) = \frac{4\sqrt{23}}{23}\right) \\ .4 = \left(\sec\left(\arcsin\left(\frac{-5}{7}\right)\right) = \frac{7\sqrt{6}}{12}\right) & .5 = \left(\sin(\arctan(1)) = \frac{\sqrt{2}}{2}\right) & .6 = \left(\tan\left(\arcsin\left(\frac{\sqrt{6}}{7}\right)\right) = \frac{\sqrt{6}\sqrt{43}}{43}\right) \\ .7 = \left(\sin\left(\arccos\left(\frac{-4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .8 = \left(\cot(\arctan(-2)) = \frac{-1}{2}\right) & .9 = \left(\csc\left(\arccos\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{5\sqrt{22}}{22}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{1}{3}\right)\right) = \frac{\sqrt{2}\sqrt{3}}{3} + \frac{1}{6}\right) & .2 = \left(\cos\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{-5}{9}\right)\right) = \frac{8\sqrt{14}}{45} + \frac{1}{3}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{1}{6}\right)\right) = \frac{\sqrt{35}}{18}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{4}{7}\right)\right) = \frac{17}{49}\right) \\ .5 = \left(\arctan(\cos(4\pi) + \sin(-3\pi)) = \frac{\pi}{4}\right) & .6 = \left(\cot\left(\arccos\left(\sin\left(\frac{11\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{5\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.12483

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin(1) = \frac{\pi}{2}\right) & .2 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .3 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) \\ .4 = (\arcsin(-5) = \textit{undefined}) & .5 = \left(\arccos(0) = \frac{\pi}{2}\right) & .6 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) \\ .7 = \left(\arccos\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .8 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .9 = (\arctan(0) = 0) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = (\tan(\arctan(-1)) = -1) & .2 = \left(\tan\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{3}\right) & .3 = \left(\cos\left(\arcsin\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) \\ .4 = \left(\sin(\arctan(-\sqrt{3})) = -\frac{\sqrt{3}}{2}\right) & .5 = \left(\arctan\left(\tan\left(-\frac{\pi}{3}\right)\right) = -\frac{\pi}{3}\right) & .6 = \left(\arcsin\left(\cos\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{3}\right) \\ .7 = \left(\arcsin\left(\sin\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(\frac{5\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\tan\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\sec\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\tan\left(\arcsin\left(\cos\left(-\frac{\pi}{4}\right)\right)\right) = 1\right) & .12 = \left(\arccos\left(\sin\left(\arccos\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\sec\left(\arcsin\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{9\sqrt{19}}{38}\right) & .2 = \left(\csc\left(\arctan\left(\frac{7}{4}\right)\right) = \frac{\sqrt{65}}{7}\right) & .3 = \left(\cos\left(\arcsin\left(\frac{-1}{6}\right)\right) = \frac{\sqrt{35}}{6}\right) \\ .4 = \left(\cot\left(\arccos\left(\frac{-1}{3}\right)\right) = -\frac{\sqrt{2}}{4}\right) & .5 = \left(\tan\left(\arcsin\left(\frac{4}{7}\right)\right) = \frac{4\sqrt{33}}{33}\right) & .6 = \left(\cos\left(\arctan\left(\frac{-7}{5}\right)\right) = \frac{5\sqrt{74}}{74}\right) \\ .7 = \left(\sin(\arctan(\sqrt{6})) = \frac{\sqrt{6}\sqrt{7}}{7}\right) & .8 = \left(\tan\left(\arccos\left(\frac{1}{3}\right)\right) = 2\sqrt{2}\right) & .9 = \left(\sin\left(\arccos\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{\sqrt{115}}{11}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{2}\sqrt{3}}{3} - \frac{1}{6}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{1}{3}\right)\right) = \frac{\sqrt{2}}{3} - \frac{\sqrt{3}}{6}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{1}{5}\right)\right) = \frac{4\sqrt{6}}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{5}\right)\right) = \frac{-17}{25}\right) \\ .5 = \left(\arctan(\cos(5\pi) + \sin(\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\cot\left(\arccos\left(\sin\left(\frac{17\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{8\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \ , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.12557

$$Ans1=\left[\begin{array}{ccc} .1=(\arcTan(0)=0) & .2=\left(\arcSin(-1)=-\frac{\pi}{2}\right) & .3=\left(\arcTan(-1)=-\frac{\pi}{4}\right) \\ .4=\left(\arcCos(0)=\frac{\pi}{2}\right) & .5=\left(\arcCos\left(-\frac{\sqrt{3}}{2}\right)=\frac{5\pi}{6}\right) & .6=\left(\arcCos\left(\frac{\sqrt{3}}{2}\right)=\frac{\pi}{6}\right) \\ .7=\left(\arcSin\left(-\frac{\sqrt{2}}{2}\right)=-\frac{\pi}{4}\right) & .8=(\arcCos(\sqrt{3})=undefined) & .9=\left(\arcSin\left(\frac{\sqrt{2}}{2}\right)=\frac{\pi}{4}\right) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans2=\left[\begin{array}{ccc} .1=\left(\mathrm{Sin}\left(\arcSin\left(-\frac{\sqrt{3}}{2}\right)\right)=-\frac{\sqrt{3}}{2}\right) & .2=\left(\mathrm{Sin}\left(\arcCos\left(\frac{\sqrt{3}}{2}\right)\right)=\frac{1}{2}\right) & .3=\left(\mathrm{Tan}\left(\arcCos\left(\frac{-1}{2}\right)\right)=-\sqrt{3}\right) \\ .4=\left(\mathrm{Cos}\left(\arcTan\left(-\frac{\sqrt{3}}{3}\right)\right)=\frac{\sqrt{3}}{2}\right) & .5=\left(\arcSin\left(\mathrm{Sin}\left(\frac{\pi}{4}\right)\right)=\frac{\pi}{4}\right) & .6=\left(\arcSin\left(\mathrm{Cos}\left(\frac{2\pi}{3}\right)\right)=-\frac{\pi}{6}\right) \\ .7=\left(\arcSin\left(\mathrm{Sin}\left(\frac{13\pi}{6}\right)\right)=\frac{\pi}{6}\right) & .8=\left(\arcCos\left(\mathrm{Cos}\left(\frac{7\pi}{3}\right)\right)=\frac{\pi}{3}\right) & .9=\left(\arcTan\left(\mathrm{Tan}\left(\frac{17\pi}{6}\right)\right)=-\frac{\pi}{6}\right) \\ .10=\left(\mathrm{Csc}(\arcTan(-\sqrt{3}))=-\frac{2\sqrt{3}}{3}\right) & .11=\left(\mathrm{Cot}\left(\arcCos\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right)\right)=-\frac{\sqrt{3}}{3}\right) & .12=\left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(\frac{\sqrt{2}}{2}\right)\right)\right)=\frac{\pi}{4}\right) \end{array}\right], \ , \left[\begin{array}{c} :) \\ :(\\ \left[\left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]\right] \\ :) \\ :(\end{array}\right]$$

$$Ans3=\left[\begin{array}{ccc} .1=\left(\mathrm{Csc}\left(\arcCos\left(\frac{1}{3}\right)\right)=\frac{3\sqrt{2}}{4}\right) & .2=\left(\mathrm{Sec}\left(\arcSin\left(\frac{3}{4}\right)\right)=\frac{4\sqrt{7}}{7}\right) & .3=\left(\mathrm{Tan}\left(\arcSin\left(\frac{-2}{7}\right)\right)=-\frac{2\sqrt{5}}{15}\right) \\ .4=\left(\mathrm{Sin}\left(\arcCos\left(\frac{-2}{3}\right)\right)=\frac{\sqrt{5}}{3}\right) & .5=\left(\mathrm{Tan}\left(\arcCos\left(\frac{\sqrt{7}}{9}\right)\right)=\frac{\sqrt{7}\sqrt{74}}{7}\right) & .6=\left(\mathrm{Cos}\left(\arcSin\left(\frac{\sqrt{2}}{5}\right)\right)=\frac{\sqrt{23}}{5}\right) \\ .7=\left(\mathrm{Cot}\left(\arcTan\left(\frac{1}{7}\right)\right)=7\right) & .8=\left(\mathrm{Sin}\left(\arcTan\left(\frac{-5}{3}\right)\right)=-\frac{5\sqrt{34}}{34}\right) & .9=\left(\mathrm{Cos}(\arcTan(\sqrt{6}))=\frac{\sqrt{7}}{7}\right) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans4=\left[\begin{array}{cc} .1=\left(\mathrm{Sin}\left(\arcCos\left(\frac{2}{3}\right)+\arcSin\left(\frac{-2}{3}\right)\right)=\frac{1}{9}\right) & .2=\left(\mathrm{Cos}\left(\arcCos\left(\frac{2}{3}\right)+\arcSin\left(\frac{3}{8}\right)\right)=\frac{\sqrt{55}}{12}-\frac{\sqrt{5}}{8}\right) \\ .3=\left(\mathrm{Sin}\left(2\arcSin\left(\frac{1}{2}\right)\right)=\frac{\sqrt{3}}{2}\right) & .4=\left(\cos\left(2\arcCos\left(\frac{4}{5}\right)\right)=\frac{7}{25}\right) \\ .5=\left(\arcTan(\mathrm{Cos}(\pi)+\mathrm{Sin}(-2\pi))=-\frac{\pi}{4}\right) & .6=\left(\mathrm{Sec}\left(\arcCos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right)+\arcSin\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right)\right)=-2\right) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans5=2\,\alpha\sqrt{1-\alpha^2}, \ , \left[\begin{array}{c} M\\U\\T \end{array}\right]$$

$$Ans6=2\,\alpha^2-1, \ , \left[\begin{array}{c} M\\U\\T \end{array}\right]$$

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TrigonometryExercise5 Answers for No.12637

$$Ans1=\left[\begin{array}{ccc} .1=\left(\arcCos\left(\frac{1}{2}\right)=\frac{\pi}{3}\right) & .2=\left(\arcTan\left(-\frac{\sqrt{3}}{3}\right)=-\frac{\pi}{6}\right) & .3=\left(\arcSin\left(-\frac{\sqrt{3}}{2}\right)=-\frac{\pi}{3}\right) \\ .4=\left(\arcCos\left(\frac{-1}{2}\right)=\frac{2\pi}{3}\right) & .5=\left(\arcSin\left(\frac{\sqrt{2}}{2}\right)=\frac{\pi}{4}\right) & .6=(\arcCos(1)=0) \\ .7=(\arcTan(0)=0) & .8=\left(\arcSin(-1)=-\frac{\pi}{2}\right) & .9=(\arcSin(3)=undefined) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans2=\left[\begin{array}{ccc} .1=\left(\cos\left(\arcCos\left(\frac{-1}{2}\right)\right)=\frac{-1}{2}\right) & .2=\left(\mathrm{Sin}\left(\arcCos\left(-\frac{\sqrt{3}}{2}\right)\right)=\frac{1}{2}\right) & .3=\left(\mathrm{Cos}(\arcTan(-1))=\frac{\sqrt{2}}{2}\right) \\ .4=\left(\mathrm{Tan}\left(\arcCos\left(\frac{1}{2}\right)\right)=\sqrt{3}\right) & .5=\left(\arcTan\left(\mathrm{Tan}\left(-\frac{\pi}{3}\right)\right)=-\frac{\pi}{3}\right) & .6=\left(\arcCos\left(\mathrm{Sin}\left(-\frac{\pi}{6}\right)\right)=\frac{2\pi}{3}\right) \\ .7=\left(\arcSin\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right)=\frac{\pi}{6}\right) & .8=\left(\arcCos\left(\mathrm{Cos}\left(-\frac{2\pi}{3}\right)\right)=\frac{2\pi}{3}\right) & .9=\left(\arcTan\left(\mathrm{Tan}\left(-\frac{5\pi}{6}\right)\right)=\frac{\pi}{6}\right) \\ .10=(\mathrm{Sec}(\arcTan(1))=\sqrt{2}) & .11=\left(\mathrm{Sec}\left(\arcSin\left(\mathrm{Cos}\left(\frac{13\pi}{3}\right)\right)\right)=\frac{2\sqrt{3}}{3}\right) & .12=\left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(-\frac{\sqrt{2}}{2}\right)\right)\right)=\frac{\pi}{4}\right) \end{array}\right], \ , \left[\begin{array}{c} :) \\ :(\\ \left[\left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]\right] \\ :) \\ :(\end{array}\right]$$

$$Ans3=\left[\begin{array}{ccc} .1=\left(\mathrm{Sin}\left(\arcTan\left(\frac{7}{2}\right)\right)=\frac{7\sqrt{53}}{53}\right) & .2=\left(\mathrm{Cos}\left(\arcSin\left(\frac{\sqrt{7}}{9}\right)\right)=\frac{\sqrt{74}}{9}\right) & .3=\left(\mathrm{Sec}\left(\arcSin\left(\frac{-1}{5}\right)\right)=\frac{5\sqrt{6}}{12}\right) \\ .4=\left(\mathrm{Tan}\left(\arcCos\left(\frac{1}{4}\right)\right)=\sqrt{15}\right) & .5=\left(\mathrm{Cot}\left(\arcCos\left(\frac{-4}{5}\right)\right)=\frac{-4}{3}\right) & .6=\left(\mathrm{Csc}\left(\arcTan\left(\frac{-1}{6}\right)\right)=-\sqrt{37}\right) \\ .7=\left(\mathrm{Tan}\left(\arcSin\left(\frac{3}{4}\right)\right)=\frac{3\sqrt{7}}{7}\right) & .8=\left(\mathrm{Cos}\left(\arcTan\left(-\frac{\sqrt{3}}{7}\right)\right)=\frac{7\sqrt{13}}{26}\right) & .9=\left(\mathrm{Sin}\left(\arcCos\left(\frac{\sqrt{2}}{3}\right)\right)=\frac{\sqrt{7}}{3}\right) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans4=\left[\begin{array}{cc} .1=\left(\mathrm{Sin}\left(\arcCos\left(\frac{1}{3}\right)+\arcSin\left(\frac{2}{3}\right)\right)=\frac{2\sqrt{2}\sqrt{5}}{9}+\frac{2}{9}\right) & .2=\left(\mathrm{Cos}\left(\arcCos\left(\frac{1}{6}\right)+\arcSin\left(\frac{-3}{5}\right)\right)=\frac{2}{15}+\frac{\sqrt{35}}{10}\right) \\ .3=\left(\mathrm{Sin}\left(2\arcSin\left(\frac{2}{3}\right)\right)=\frac{4\sqrt{5}}{9}\right) & .4=\left(\cos\left(2\arcCos\left(\frac{3}{7}\right)\right)=\frac{-31}{49}\right) \\ .5=\left(\arcTan(\mathrm{Cos}(3\pi)+\mathrm{Sin}(-4\pi))=-\frac{\pi}{4}\right) & .6=\left(\mathrm{Cot}\left(\arcCos\left(\mathrm{Sin}\left(\frac{17\pi}{6}\right)\right)+\arcSin\left(\mathrm{Cos}\left(\frac{4\pi}{3}\right)\right)\right)=\sqrt{3}\right) \end{array}\right], \ , \left[\begin{array}{c} M\\a\\t\\h\\@\\M\\U\\T \end{array}\right]$$

$$Ans5=2\,\alpha\sqrt{1-\alpha^2}, \ , \left[\begin{array}{c} M\\U\\T \end{array}\right]$$

$$Ans6=2\,\alpha^2-1, \ , \left[\begin{array}{c} M\\U\\T \end{array}\right]$$

TrigonometryExercise5 Answers for No.12689

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .2 = \left(\arcsin(1) = \frac{\pi}{2}\right) & .3 = (\arcsin(3) = undefined) \\ .4 = \left(\arccos(0) = \frac{\pi}{2}\right) & .5 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .6 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) \\ .7 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .8 = \left(\arctan(1) = \frac{\pi}{4}\right) & .9 = \left(\arccos\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(\frac{-1}{2}\right)\right) = \frac{-1}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{1}{2}\right) & .5 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{\pi}{3}\right)\right) = -\frac{\pi}{3}\right) & .6 = \left(\arcsin\left(\mathrm{Cos}\left(\frac{3\pi}{4}\right)\right) = -\frac{\pi}{4}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right) = \frac{5\pi}{6}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = (\mathrm{Cot}(\arctan(-1)) = -1) & .11 = \left(\mathrm{Csc}\left(\arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = -2\right) & .12 = \left(\mathrm{ArcCos}\left(\mathrm{Sin}\left(\mathrm{ArcCos}\left(\frac{1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{-2}{3}\right)\right) = \frac{-3}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-4}{3}\right)\right) = \frac{3}{5}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{2}\sqrt{47}}{47}\right) \\ .4 = \left(\mathrm{Cot}\left(\arctan\left(\frac{5}{6}\right)\right) = \frac{6}{5}\right) & .5 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) & .6 = \left(\mathrm{Tan}\left(\arccos\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}\sqrt{3}}{3}\right) \\ .7 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) & .8 = \left(\mathrm{Sin}(\arctan(-\sqrt{7})) = -\frac{\sqrt{7}\sqrt{2}}{4}\right) & .9 = \left(\mathrm{Sec}\left(\arccos\left(\frac{4}{7}\right)\right) = \frac{7}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{8}\right) + \arcsin\left(\frac{-3}{8}\right)\right) = \frac{\sqrt{39}\sqrt{55}}{64} - \frac{15}{64}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{5}{6}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{5\sqrt{3}}{12} - \frac{\sqrt{11}}{12}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{8}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{7}\right)\right) = \frac{-31}{49}\right) \\ .5 = \left(\arctan(\mathrm{Cos}(2\pi) + \mathrm{Sin}(-3\pi)) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.13349

$$Ans1 = \begin{bmatrix} .1 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) & .2 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .3 = \left(\arcsin\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) \\ .4 = (\arccos(-\sqrt{3}) = undefined) & .5 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .6 = \left(\arctan(1) = \frac{\pi}{4}\right) \\ .7 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .8 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .9 = (\arccos(1) = 0) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .2 = \left(\mathrm{Cos}(\arctan(-1)) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{3}}{3}\right)\right) = \frac{1}{2}\right) \\ .4 = \left(\mathrm{Tan}\left(\arccos\left(\frac{1}{2}\right)\right) = \sqrt{3}\right) & .5 = \left(\arccos\left(\mathrm{Cos}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .6 = \left(\arccos\left(\mathrm{Sin}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(\frac{7\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = (\mathrm{Sec}(\arctan(-\sqrt{3})) = 2) & .11 = \left(\mathrm{Csc}\left(\arcsin\left(\mathrm{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = -2\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arctan\left(\frac{-6}{7}\right)\right) = -\frac{\sqrt{85}}{6}\right) & .2 = \left(\mathrm{Cot}\left(\arcsin\left(-\frac{\sqrt{7}}{10}\right)\right) = -\frac{\sqrt{7}\sqrt{93}}{7}\right) & .3 = \left(\mathrm{Cos}\left(\arctan\left(\frac{5}{6}\right)\right) = \frac{6\sqrt{61}}{61}\right) \\ .4 = \left(\mathrm{Sec}\left(\arccos\left(\frac{-1}{5}\right)\right) = -5\right) & .5 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{5}{7}\right)\right) = \frac{2\sqrt{6}}{7}\right) & .6 = \left(\mathrm{Sin}(\arctan(-\sqrt{7})) = -\frac{\sqrt{7}\sqrt{2}}{4}\right) \\ .7 = \left(\mathrm{Tan}\left(\arccos\left(\frac{5}{8}\right)\right) = \frac{\sqrt{39}}{5}\right) & .8 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-3}{7}\right)\right) = -\frac{3\sqrt{10}}{20}\right) & .9 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{5}}{6}\right)\right) = \frac{\sqrt{31}}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{3}{4}\right) + \arcsin\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{7}\sqrt{5}}{28} - \frac{3}{14}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{3}{7}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{3\sqrt{3}}{14} - \frac{\sqrt{10}}{7}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{3\pi}{2}\right) + \mathrm{Sin}\left(\frac{5\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{13\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.13519

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) & .2 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .3 = \left(\arctan\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}\right) \\ .4 = \left(\arccos(0) = \frac{\pi}{2}\right) & .5 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .6 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arctan(1) = \frac{\pi}{4}\right) & .8 = \left(\arcsin(-5) = \mathit{undefined}\right) & .9 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\cos\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{3}}{2}\right) & .2 = \left(\cos(\arctan(-1)) = \frac{\sqrt{2}}{2}\right) & .3 = \left(\sin(\arctan(1)) = \frac{\sqrt{2}}{2}\right) \\ .4 = \left(\tan\left(\arccos\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) & .5 = \left(\arctan\left(\tan\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\arcsin\left(\cos\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\sin\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{\pi}{4}\right)\right) = \frac{\pi}{4}\right) & .9 = \left(\arctan\left(\tan\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arcsin\left(\frac{1}{2}\right)\right) = 2\right) & .11 = \left(\csc\left(\arccos\left(\sin\left(\frac{5\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\arcsin\left(\cos\left(\arcsin\left(-\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ [[M\ a\ t\ h\ @\ M\ U\ T]] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\csc\left(\arccos\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{5\sqrt{23}}{23}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{-5}{7}\right)\right) = \frac{2\sqrt{6}}{7}\right) & .3 = \left(\cos\left(\arctan\left(-\frac{\sqrt{5}}{3}\right)\right) = \frac{3\sqrt{14}}{14}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{-4}{5}\right)\right) = \frac{-3}{4}\right) & .5 = \left(\sec\left(\arcsin\left(\frac{2}{5}\right)\right) = \frac{5\sqrt{21}}{21}\right) & .6 = \left(\sin\left(\arctan\left(\frac{-5}{7}\right)\right) = -\frac{5\sqrt{74}}{74}\right) \\ .7 = \left(\sin\left(\arccos\left(\frac{1}{3}\right)\right) = \frac{2\sqrt{2}}{3}\right) & .8 = \left(\cot(\arctan(6)) = \frac{1}{6}\right) & .9 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{5}}{9}\right)\right) = -\frac{\sqrt{19}\sqrt{5}}{38}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{4}\right) + \arcsin\left(\frac{4}{5}\right)\right) = \frac{3\sqrt{15}}{20} + \frac{1}{5}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{4}\right) + \arcsin\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}}{6} + \frac{\sqrt{15}}{12}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{5}\right)\right) = \frac{-7}{25}\right) \\ .5 = \left(\arctan(\cos(\pi) + \sin(3\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 2\alpha^2 - 1, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.14276

$$Ans1 = \begin{bmatrix} .1 = \left(\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}\right) & .2 = \left(\arcsin\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) & .3 = (\arctan(0) = 0) \\ .4 = (\arccos(1) = 0) & .5 = \left(\arcsin(-1) = -\frac{\pi}{2}\right) & .6 = \left(\arccos(-\sqrt{3}) = \mathit{undefined}\right) \\ .7 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .8 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .9 = \left(\arccos\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\tan\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = -\frac{\sqrt{3}}{3}\right) & .2 = \left(\cos(\arctan(\sqrt{3})) = \frac{1}{2}\right) & .3 = \left(\tan\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\sin(\arctan(-1)) = -\frac{\sqrt{2}}{2}\right) & .5 = \left(\arctan\left(\tan\left(-\frac{\pi}{4}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\arcsin\left(\cos\left(\frac{2\pi}{3}\right)\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\sin\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\cos\left(-\frac{3\pi}{4}\right)\right) = \frac{3\pi}{4}\right) & .9 = \left(\arctan\left(\tan\left(-\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}\right) \\ .10 = \left(\csc\left(\arccos\left(-\frac{\sqrt{3}}{2}\right)\right) = 2\right) & .11 = \left(\cot\left(\arccos\left(\sin\left(\frac{5\pi}{6}\right)\right)\right) = \frac{\sqrt{3}}{3}\right) & .12 = \left(\arccos\left(\sin\left(\arccos\left(\frac{-1}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \quad , \begin{bmatrix} :) \\ :(\\ [[M\ a\ t\ h\ @\ M\ U\ T]] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\tan\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{3}\right) & .2 = \left(\csc\left(\arcsin\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{9\sqrt{5}}{5}\right) & .3 = \left(\tan\left(\arccos\left(\frac{-1}{2}\right)\right) = -\sqrt{3}\right) \\ .4 = \left(\cos\left(\arcsin\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .5 = \left(\cot\left(\arctan\left(\frac{-3}{2}\right)\right) = \frac{-2}{3}\right) & .6 = \left(\sin\left(\arccos\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{23}}{5}\right) \\ .7 = \left(\sec\left(\arccos\left(\frac{1}{3}\right)\right) = 3\right) & .8 = \left(\cos\left(\arctan\left(\frac{3}{7}\right)\right) = \frac{7\sqrt{58}}{58}\right) & .9 = \left(\sin\left(\arctan\left(-\frac{\sqrt{2}}{7}\right)\right) = -\frac{\sqrt{2}\sqrt{51}}{51}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{3}{8}\right)\right) = \frac{\sqrt{2}\sqrt{55}}{12} + \frac{1}{8}\right) & .2 = \left(\cos\left(\arccos\left(\frac{5}{7}\right) + \arcsin\left(\frac{-1}{6}\right)\right) = \frac{5\sqrt{35}}{42} + \frac{\sqrt{6}}{21}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{5}{7}\right)\right) = \frac{-1}{49}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{9\pi}{2}\right) + \sin\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\cot\left(\arccos\left(\sin\left(\frac{13\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{4\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \quad , \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.14380

$$Ans1 = \begin{bmatrix} .1 = (\arccos(-1) = \pi) & .2 = \left(\arctan(-\sqrt{3}) = -\frac{\pi}{3}\right) & .3 = (\arcsin(7) = \mathit{undefined}) \\ .4 = \left(\arccos\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) & .5 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .6 = \left(\arccos\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}\right) & .8 = \left(\arcsin(1) = \frac{\pi}{2}\right) & .9 = \left(\arcsin\left(\frac{1}{2}\right) = \frac{\pi}{6}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arcsin\left(-\frac{\sqrt{2}}{2}\right)\right) = -\frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{3}\right) \\ .4 = \left(\mathrm{Cos}(\arctan(\sqrt{3})) = \frac{1}{2}\right) & .5 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{\pi}{3}\right)\right) = -\frac{\pi}{3}\right) & .6 = \left(\arcsin\left(\mathrm{Cos}\left(\frac{3\pi}{4}\right)\right) = -\frac{\pi}{4}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(-\frac{13\pi}{6}\right)\right) = -\frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(\frac{7\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(\frac{13\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Cot}\left(\arctan\left(-\frac{\sqrt{3}}{3}\right)\right) = -\sqrt{3}\right) & .11 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{\sqrt{2}}{2}\right)\right)\right) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-3}{7}\right)\right) = \frac{2\sqrt{10}}{7}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .3 = \left(\mathrm{Tan}\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{3}\right) \\ .4 = \left(\mathrm{Csc}\left(\arctan\left(\frac{4}{7}\right)\right) = \frac{\sqrt{65}}{4}\right) & .5 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{7}\right) & .6 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{13}\sqrt{3}}{3}\right) \\ .7 = \left(\mathrm{Sin}(\arctan(-\sqrt{2})) = -\frac{\sqrt{2}\sqrt{3}}{3}\right) & .8 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-1}{5}\right)\right) = \frac{5\sqrt{26}}{26}\right) & .9 = \left(\mathrm{Sec}\left(\arccos\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{6\sqrt{5}}{5}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{6}\right) + \arcsin\left(\frac{-1}{5}\right)\right) = \frac{\sqrt{35}\sqrt{6}}{15} - \frac{1}{30}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{5}{7}\right) + \arcsin\left(\frac{4}{5}\right)\right) = \frac{3}{7} - \frac{8\sqrt{6}}{35}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{1}{9}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(4\pi) + \mathrm{Sin}\left(\frac{23\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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TrigonometryExercise5 Answers for No.14393

$$Ans1 = \begin{bmatrix} .1 = \left(\arcsin\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .2 = \left(\arccos\left(\frac{1}{2}\right) = \frac{\pi}{3}\right) & .3 = (\arcsin(3) = \mathit{undefined}) \\ .4 = \left(\arctan\left(\frac{\sqrt{3}}{3}\right) = \frac{\pi}{6}\right) & .5 = \left(\arccos\left(\frac{-1}{2}\right) = \frac{2\pi}{3}\right) & .6 = \left(\arcsin\left(-\frac{\sqrt{3}}{2}\right) = -\frac{\pi}{3}\right) \\ .7 = (\arccos(1) = 0) & .8 = (\arcsin(0) = 0) & .9 = (\arctan(0) = 0) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{1}{2}\right) & .3 = \left(\mathrm{Tan}\left(\arccos\left(\frac{\sqrt{2}}{2}\right)\right) = 1\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .5 = \left(\arcsin\left(\mathrm{Sin}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .6 = \left(\arcsin\left(\mathrm{Cos}\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}\right) \\ .7 = \left(\arcsin\left(\mathrm{Sin}\left(\frac{17\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\arccos\left(\mathrm{Cos}\left(\frac{13\pi}{3}\right)\right) = \frac{\pi}{3}\right) & .9 = \left(\arctan\left(\mathrm{Tan}\left(-\frac{11\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\mathrm{Csc}\left(\arcsin\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{2\sqrt{3}}{3}\right) & .11 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right)\right) = 2\right) & .12 = \left(\mathrm{ArcSin}\left(\mathrm{Cos}\left(\mathrm{ArcSin}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{6}\right) \end{bmatrix}, \begin{bmatrix} :) \\ :(\\ \left[\left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]\right] \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{-5}{7}\right)\right) = \frac{-7}{5}\right) & .2 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-5}{9}\right)\right) = -\frac{2\sqrt{14}}{5}\right) & .3 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}}{5}\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(-\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) & .5 = \left(\mathrm{Cot}\left(\arctan\left(-\frac{\sqrt{2}}{5}\right)\right) = -\frac{5\sqrt{2}}{2}\right) & .6 = \left(\mathrm{Cos}\left(\arctan\left(\frac{3}{2}\right)\right) = \frac{2\sqrt{13}}{13}\right) \\ .7 = \left(\mathrm{Sec}\left(\arccos\left(\frac{5}{8}\right)\right) = \frac{8}{5}\right) & .8 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{5}{9}\right)\right) = \frac{5\sqrt{14}}{28}\right) & .9 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-7}{4}\right)\right) = -\frac{7\sqrt{65}}{65}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{3}\sqrt{5}}{14} - \frac{1}{7}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{4}{9}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{9} - \frac{\sqrt{65}}{18}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{5}{9}\right)\right) = \frac{20\sqrt{14}}{81}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{2}{5}\right)\right) = \frac{17}{25}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(7\pi) + \mathrm{Sin}\left(-\frac{11\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{11\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

TrigonometryExercise5 Answers for No.14417

$$Ans1 = \begin{bmatrix} .1 = (\text{arcSin}(-5) = \textit{undefined}) & .2 = \left(\text{arcTan}(-1) = -\frac{\pi}{4}\right) & .3 = \left(\text{arcCos}\left(-\frac{\sqrt{3}}{2}\right) = \frac{5\pi}{6}\right) \\ .4 = \left(\text{arcTan}(\sqrt{3}) = \frac{\pi}{3}\right) & .5 = (\text{arcSin}(0) = 0) & .6 = \left(\text{arcSin}\left(\frac{-1}{2}\right) = -\frac{\pi}{6}\right) \\ .7 = \left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}\right) & .8 = (\text{arcCos}(-1) = \pi) & .9 = \left(\text{arcCos}\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans2 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcSin}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) & .2 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{\sqrt{2}}{2}\right)\right) = \frac{\sqrt{2}}{2}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(-\frac{\sqrt{2}}{2}\right)\right) = -1\right) & .5 = \left(\text{arcSin}\left(\text{Sin}\left(\frac{\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .6 = \left(\text{arcSin}\left(\text{Cos}\left(\frac{5\pi}{6}\right)\right) = -\frac{\pi}{3}\right) \\ .7 = \left(\text{arcSin}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) = \frac{\pi}{6}\right) & .8 = \left(\text{arcCos}\left(\text{Cos}\left(\frac{8\pi}{3}\right)\right) = \frac{2\pi}{3}\right) & .9 = \left(\text{arcTan}\left(\text{Tan}\left(-\frac{5\pi}{6}\right)\right) = \frac{\pi}{6}\right) \\ .10 = \left(\text{Csc}\left(\text{arcSin}\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{2\sqrt{3}}{3}\right) & .11 = \left(\text{Sec}\left(\text{arcSin}\left(\text{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = 2\right) & .12 = \left(\text{ArcCos}\left(\text{Sin}\left(\text{ArcCos}\left(\frac{\sqrt{3}}{2}\right)\right)\right) = \frac{\pi}{3}\right) \end{bmatrix}, \begin{bmatrix} :) \\ :(\\ \begin{bmatrix}\begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}\end{bmatrix} \\ :) \\ :(\end{bmatrix}$$

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{\sqrt{5}}{3}\right)\right) = \frac{3\sqrt{14}}{14}\right) & .2 = \left(\text{Csc}\left(\text{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{7\sqrt{2}}{2}\right) & .3 = \left(\text{Cot}\left(\text{arcCos}\left(-\frac{\sqrt{3}}{5}\right)\right) = -\frac{\sqrt{22}\sqrt{3}}{22}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{5}{8}\right)\right) = \frac{5\sqrt{39}}{39}\right) & .5 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .6 = (\text{Sec}(\text{arcTan}(6)) = \sqrt{37}) \\ .7 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{-3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .8 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{5}{7}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .9 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{-5}{3}\right)\right) = -\frac{5\sqrt{34}}{34}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{4}\right) + \text{arcSin}\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{15}\sqrt{5}}{12} - \frac{1}{6}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{5}{6}\right) + \text{arcSin}\left(\frac{4}{9}\right)\right) = \frac{5\sqrt{65}}{54} - \frac{2\sqrt{11}}{27}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcSin}\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(6\pi) + \text{Sin}\left(\frac{19\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Csc}\left(\text{arcCos}\left(\text{Sin}\left(\frac{5\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

$$Ans6 = 1 - 2\alpha^2, \begin{bmatrix} M \\ U \\ T \end{bmatrix}$$

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