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TrigonometryExercise5 Answers for No.9012

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) & .3 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-2}{3}\right)\right) = -\frac{2\sqrt{13}}{13}\right) \\ .4 = \left(\mathrm{Tan}\left(\arccos\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{3}\right) & .5 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-1}{6}\right)\right) = -\frac{\sqrt{35}}{35}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\frac{-2}{7}\right)\right) = -\frac{2\sqrt{5}}{15}\right) \\ .7 = \left(\mathrm{Sec}\left(\arcsin\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{5\sqrt{23}}{23}\right) & .8 = \left(\mathrm{Cos}\left(\arctan\left(\frac{7}{5}\right)\right) = \frac{5\sqrt{74}}{74}\right) & .9 = \left(\mathrm{Csc}\left(\arctan\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{7}\right) + \arcsin\left(\frac{-2}{5}\right)\right) = \frac{2\sqrt{6}\sqrt{21}}{35} - \frac{2}{7}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{5}{6}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{5\sqrt{3}}{12} - \frac{\sqrt{11}}{12}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{4}{5}\right)\right) = \frac{-7}{25}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{3\pi}{2}\right) + \mathrm{Sin}\left(-\frac{5\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9016

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sec}\left(\arctan\left(-\frac{\sqrt{5}}{3}\right)\right) = \frac{\sqrt{14}}{3}\right) & .2 = \left(\mathrm{Csc}\left(\arccos\left(\frac{\sqrt{5}}{7}\right)\right) = \frac{7\sqrt{11}}{22}\right) & .3 = \left(\mathrm{Cos}(\arctan(-3)) = \frac{\sqrt{10}}{10}\right) \\ .4 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .5 = \left(\mathrm{Sin}\left(\arctan\left(\frac{4}{7}\right)\right) = \frac{4\sqrt{65}}{65}\right) & .6 = \left(\mathrm{Cos}\left(\arcsin\left(-\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) \\ .7 = \left(\mathrm{Tan}\left(\arccos\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{2}\right) & .8 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{-5}{6}\right)\right) = -\frac{\sqrt{11}}{5}\right) & .9 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{5}{9}\right)\right) = \frac{5\sqrt{14}}{28}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{9}\right) + \arcsin\left(\frac{2}{7}\right)\right) = \frac{\sqrt{65}\sqrt{5}}{21} + \frac{8}{63}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{-2}{7}\right)\right) = \frac{\sqrt{5}}{7} + \frac{4\sqrt{2}}{21}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(3\pi) + \mathrm{Sin}\left(\frac{13\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(-\frac{17\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{11\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.9018

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Csc}\left(\arctan\left(\frac{-6}{5}\right)\right) = -\frac{\sqrt{61}}{6}\right) & .2 = \left(\operatorname{Sec}\left(\arcsin\left(\frac{1}{4}\right)\right) = \frac{4\sqrt{15}}{15}\right) & .3 = \left(\operatorname{Cot}\left(\arccos\left(\frac{-2}{5}\right)\right) = -\frac{2\sqrt{21}}{21}\right) \\ .4 = \left(\operatorname{Cos}\left(\arcsin\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{59}}{8}\right) & .5 = \left(\operatorname{Tan}\left(\arcsin\left(\frac{-4}{9}\right)\right) = -\frac{4\sqrt{65}}{65}\right) & .6 = \left(\operatorname{Sin}\left(\arctan\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{3}}{7}\right) \\ .7 = \left(\operatorname{Tan}\left(\arccos\left(\frac{\sqrt{5}}{7}\right)\right) = \frac{2\sqrt{11}\sqrt{5}}{5}\right) & .8 = \left(\operatorname{Sin}\left(\arccos\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{8}\right) & .9 = \left(\operatorname{Cos}\left(\arctan\left(\frac{6}{5}\right)\right) = \frac{5\sqrt{61}}{61}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\arccos\left(\frac{5}{6}\right) + \arcsin\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}\sqrt{11}}{9} - \frac{5}{18}\right) & .2 = \left(\operatorname{Cos}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{8} - \frac{3\sqrt{3}}{8}\right) \\ .3 = \left(\operatorname{Sin}\left(2\arcsin\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{5}{6}\right)\right) = \frac{7}{18}\right) \\ .5 = \left(\arctan\left(\operatorname{Cos}\left(\frac{9\pi}{2}\right) + \operatorname{Sin}\left(\frac{\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\operatorname{Csc}\left(\arccos\left(\operatorname{Sin}\left(\frac{13\pi}{6}\right)\right) + \arcsin\left(\operatorname{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9036

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\operatorname{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{2}\sqrt{7}}{7}\right) & .2 = \left(\operatorname{Cos}\left(\arcsin\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{5}}{7}\right) & .3 = \left(\operatorname{Sec}\left(\arcsin\left(\frac{1}{3}\right)\right) = \frac{3\sqrt{2}}{4}\right) \\ .4 = \left(\operatorname{Cot}\left(\arctan\left(-\frac{\sqrt{7}}{4}\right)\right) = -\frac{4\sqrt{7}}{7}\right) & .5 = \left(\operatorname{Csc}\left(\arccos\left(-\frac{\sqrt{2}}{7}\right)\right) = \frac{7\sqrt{47}}{47}\right) & .6 = \left(\operatorname{Sin}(\arctan(-7)) = -\frac{7\sqrt{2}}{10}\right) \\ .7 = \left(\operatorname{Cos}(\arctan(5)) = \frac{\sqrt{26}}{26}\right) & .8 = \left(\operatorname{Tan}\left(\arccos\left(\frac{-2}{7}\right)\right) = -\frac{3\sqrt{5}}{2}\right) & .9 = \left(\operatorname{Sin}\left(\arccos\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\operatorname{Sin}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{1}{5}\right)\right) = \frac{\sqrt{3}\sqrt{6}}{5} + \frac{1}{10}\right) & .2 = \left(\operatorname{Cos}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}}{3} + \frac{\sqrt{3}}{6}\right) \\ .3 = \left(\operatorname{Sin}\left(2\arcsin\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{8}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan\left(\operatorname{Cos}\left(\frac{3\pi}{2}\right) + \operatorname{Sin}\left(\frac{7\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\operatorname{Csc}\left(\arccos\left(\operatorname{Sin}\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\operatorname{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.9037

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Sin}(\text{arcTan}(-3)) = -\frac{3\sqrt{10}}{10}\right) & .2 = \left(\text{Csc}\left(\text{arcCos}\left(\frac{-4}{9}\right)\right) = \frac{9\sqrt{65}}{65}\right) & .3 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) \\ .4 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{8\sqrt{59}}{59}\right) & .5 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) & .6 = \left(\text{Cot}\left(\text{arcTan}\left(\frac{\sqrt{7}}{2}\right)\right) = \frac{2\sqrt{7}}{7}\right) \\ .7 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{4}\right) & .8 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{4}\right) & .9 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{3}{5}\right)\right) = \frac{5\sqrt{34}}{34}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{5}{6}\right) + \text{arcSin}\left(\frac{-4}{5}\right)\right) = \frac{\sqrt{11}}{10} - \frac{2}{3}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{6}\right) + \text{arcSin}\left(\frac{1}{3}\right)\right) = \frac{\sqrt{2}}{9} - \frac{\sqrt{35}}{18}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{1}{6}\right)\right) = \frac{-17}{18}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(2\pi) + \text{Sin}\left(\frac{15\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9138

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{3}\sqrt{22}}{22}\right) & .2 = \left(\text{Cot}\left(\text{arcCos}\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{\sqrt{3}\sqrt{13}}{13}\right) & .3 = \left(\text{Csc}\left(\text{arcSin}\left(\frac{-5}{6}\right)\right) = \frac{-6}{5}\right) \\ .4 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{7}{5}\right)\right) = \frac{5\sqrt{74}}{74}\right) & .5 = \left(\text{Sec}\left(\text{arcTan}\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{3\sqrt{3}}{5}\right) & .6 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{7}\right) \\ .7 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .8 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{4}\right) & .9 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{-7}{4}\right)\right) = -\frac{7\sqrt{65}}{65}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{1}{5}\right)\right) = \frac{\sqrt{3}\sqrt{6}}{5} + \frac{1}{10}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{-3}{4}\right)\right) = \frac{\sqrt{7}}{8} + \frac{3\sqrt{3}}{8}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(6\pi) + \text{Sin}\left(\frac{23\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Cot}\left(\text{arcCos}\left(\text{Sin}\left(\frac{11\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{5\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9602

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Csc}\left(\text{arcTan}\left(\frac{-1}{2}\right)\right) = -\sqrt{5}\right) & .2 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{-5}{7}\right)\right) = \frac{7\sqrt{6}}{12}\right) & .3 = \left(\text{Cot}\left(\text{arcCos}\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{15}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{5}\sqrt{59}}{59}\right) & .5 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{5}{3}\right)\right) = \frac{3\sqrt{34}}{34}\right) & .6 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{\sqrt{5}\sqrt{41}}{41}\right) \\ .7 = \left(\text{Tan}\left(\text{arcCos}\left(-\frac{\sqrt{7}}{12}\right)\right) = -\frac{\sqrt{137}\sqrt{7}}{7}\right) & .8 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-3}{5}\right)\right) = \frac{4}{5}\right) & .9 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{2}{3}\right) + \text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}\sqrt{5}}{6} + \frac{1}{3}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{3}\right) + \text{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{2}}{3} + \frac{\sqrt{3}}{6}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\,\text{arcSin}\left(\frac{5}{9}\right)\right) = \frac{31}{81}\right) \\ .5 = \left(\text{arcTan}(\text{Cos}(3\pi) + \text{Sin}(\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\text{Csc}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9616

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Sec}\left(\text{arcCos}\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{5\sqrt{3}}{3}\right) & .2 = \left(\text{Cot}\left(\text{arcTan}\left(\frac{-7}{6}\right)\right) = \frac{-6}{7}\right) & .3 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{7}\right) \\ .4 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{7}{2}\right)\right) = \frac{2\sqrt{53}}{53}\right) & .5 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{-1}{4}\right)\right) = -\sqrt{15}\right) & .6 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) \\ .7 = \left(\text{Sin}\left(\text{arcTan}\left(-\frac{\sqrt{7}}{4}\right)\right) = -\frac{\sqrt{7}\sqrt{23}}{23}\right) & .8 = \left(\text{Csc}\left(\text{arcSin}\left(-\frac{\sqrt{2}}{7}\right)\right) = -\frac{7\sqrt{2}}{2}\right) & .9 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{-1}{3}\right)\right) = -\frac{\sqrt{2}}{4}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{4}{5}\right) + \text{arcSin}\left(\frac{-3}{8}\right)\right) = \frac{3\sqrt{55}}{40} - \frac{3}{10}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{5}{8}\right) + \text{arcSin}\left(\frac{4}{9}\right)\right) = \frac{5\sqrt{65}}{72} - \frac{\sqrt{39}}{18}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcSin}\left(\frac{4}{9}\right)\right) = \frac{8\sqrt{65}}{81}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}\left(\frac{\pi}{2}\right) + \text{Sin}\left(\frac{3\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(\frac{13\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.10152

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{3}\sqrt{22}}{22}\right) & .2 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{6}}{7}\right)\right) = \frac{\sqrt{6}\sqrt{55}}{55}\right) & .3 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) \\ .4 = \left(\mathrm{Csc}\left(\arctan\left(\frac{1}{2}\right)\right) = \sqrt{5}\right) & .5 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-5}{7}\right)\right) = \frac{7\sqrt{74}}{74}\right) & .6 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-4}{5}\right)\right) = \frac{3}{5}\right) \\ .7 = \left(\mathrm{Cot}\left(\arccos\left(\frac{-3}{8}\right)\right) = -\frac{3\sqrt{55}}{55}\right) & .8 = \left(\mathrm{Tan}\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{3}\right) & .9 = \left(\mathrm{Sec}\left(\arcsin\left(\frac{5}{9}\right)\right) = \frac{9\sqrt{14}}{28}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{7}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{33}\sqrt{3}}{14} - \frac{2}{7}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{2}{5}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{5} - \frac{\sqrt{21}}{10}\right) \\ .3 = \left(\mathrm{Sin}\left(2 \arcsin\left(\frac{1}{3}\right)\right) = \frac{4\sqrt{2}}{9}\right) & .4 = \left(\cos\left(2 \arcsin\left(\frac{1}{2}\right)\right) = \frac{1}{2}\right) \\ .5 = \left(\arctan(\mathrm{Cos}(2\pi) + \mathrm{Sin}(-5\pi)) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(\frac{13\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11738

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) & .2 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-1}{5}\right)\right) = -2\sqrt{6}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{2}\sqrt{23}}{23}\right) \\ .4 = (\mathrm{Csc}(\arctan(1)) = \sqrt{2}) & .5 = \left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{3}}{2}\right)\right) = \frac{2\sqrt{7}}{7}\right) & .6 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-1}{4}\right)\right) = -\frac{\sqrt{17}}{17}\right) \\ .7 = \left(\mathrm{Sec}\left(\arcsin\left(\frac{-3}{7}\right)\right) = \frac{7\sqrt{10}}{20}\right) & .8 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{7}\right) & .9 = \left(\mathrm{Cot}\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{3\sqrt{10}}{20}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{1}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{5} - \frac{9}{20}\right) \\ .3 = \left(\mathrm{Sin}\left(2 \arccos\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{8}\right) & .4 = \left(\cos\left(2 \arcsin\left(\frac{2}{5}\right)\right) = \frac{17}{25}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{\pi}{2}\right) + \mathrm{Sin}\left(-\frac{3\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{11\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11754

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arctan\left(-\frac{\sqrt{3}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{3}}{3}\right) & .2 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-5}{6}\right)\right) = \frac{6\sqrt{61}}{61}\right) & .3 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{3}{5}\right)\right) = \frac{4}{3}\right) \\ .4 = \left(\mathrm{Sin}\left(\arctan\left(\frac{5}{3}\right)\right) = \frac{5\sqrt{34}}{34}\right) & .5 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .6 = \left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{5}}{9}\right)\right) = -\frac{\sqrt{5}\sqrt{19}}{38}\right) \\ .7 = \left(\mathrm{Sec}\left(\arccos\left(\frac{5}{9}\right)\right) = \frac{9}{5}\right) & .8 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) & .9 = \left(\mathrm{Tan}\left(\arccos\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{2}\sqrt{7}}{2}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{3\sqrt{3}}{10} - \frac{2}{5}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{3}{8}\right) + \arcsin\left(\frac{1}{5}\right)\right) = \frac{3\sqrt{6}}{20} - \frac{\sqrt{55}}{40}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{5}{7}\right)\right) = \frac{20\sqrt{6}}{49}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{7}\right)\right) = \frac{-41}{49}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(9\pi) + \mathrm{Sin}\left(\frac{5\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(\frac{13\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11841

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-1}{4}\right)\right) = -\frac{\sqrt{15}}{15}\right) & .2 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{4}\right) & .3 = \left(\mathrm{Tan}\left(\arccos\left(\frac{\sqrt{6}}{7}\right)\right) = \frac{\sqrt{43}\sqrt{6}}{6}\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(-\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) & .5 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-1}{2}\right)\right) = \frac{2\sqrt{5}}{5}\right) & .6 = \left(\mathrm{Csc}\left(\arctan\left(\frac{7}{6}\right)\right) = \frac{\sqrt{85}}{7}\right) \\ .7 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .8 = \left(\mathrm{Sec}\left(\arccos\left(\frac{-1}{4}\right)\right) = -4\right) & .9 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{2}\sqrt{51}}{51}\right) \end{bmatrix}, \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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

TrigonometryExercise5 Answers for No.11842

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\text{Csc}\left(\text{arcCos}\left(\frac{-5}{8}\right)\right) = \frac{8\sqrt{39}}{39}\right) & .2 = \left(\text{Tan}\left(\text{arcCos}\left(-\frac{\sqrt{6}}{11}\right)\right) = -\frac{\sqrt{115}\sqrt{6}}{6}\right) & .3 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{8}\right) \\ .4 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{-5}{3}\right)\right) = -\frac{5\sqrt{34}}{34}\right) & .5 = \left(\text{Cos}\left(\text{arcTan}\left(-\frac{\sqrt{5}}{6}\right)\right) = \frac{6\sqrt{41}}{41}\right) & .6 = (\text{Sec}(\text{arcTan}(4)) = \sqrt{17}) \\ .7 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{6}\right)\right) = \frac{\sqrt{35}}{6}\right) & .8 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{\sqrt{115}\sqrt{6}}{115}\right) & .9 = \left(\text{Cot}\left(\text{arcSin}\left(\frac{-5}{6}\right)\right) = -\frac{\sqrt{11}}{5}\right) \end{array}\right], \quad , \left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{5}{7}\right) + \text{arcSin}\left(\frac{4}{7}\right)\right) = \frac{2\sqrt{6}\sqrt{33}}{49} + \frac{20}{49}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{3}\right) + \text{arcSin}\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{9} + \frac{4\sqrt{2}}{9}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\,\text{arcSin}\left(\frac{3}{8}\right)\right) = \frac{23}{32}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}\left(\frac{3\pi}{2}\right) + \text{Sin}\left(\frac{3\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{Cot}\left(\text{arcCos}\left(\text{Sin}\left(\frac{17\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = -\frac{\sqrt{3}}{3}\right) \end{array}\right], \quad , \left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]$$

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

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

TrigonometryExercise5 Answers for No.11901

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{\sqrt{7}}{3}\right)\right) = \frac{3}{4}\right) & .2 = \left(\text{Cot}\left(\text{arcSin}\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{5}\right) & .3 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{1}{3}\right)\right) = 2\sqrt{2}\right) \\ .4 = \left(\text{Csc}\left(\text{arcCos}\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{11\sqrt{115}}{115}\right) & .5 = \left(\text{Sin}(\text{arcTan}(5)) = \frac{5\sqrt{26}}{26}\right) & .6 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{-5}{9}\right)\right) = -\frac{5\sqrt{14}}{28}\right) \\ .7 = \left(\text{Sec}\left(\text{arcTan}\left(\frac{-1}{6}\right)\right) = \frac{\sqrt{37}}{6}\right) & .8 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-3}{5}\right)\right) = \frac{4}{5}\right) & .9 = \left(\text{Cos}\left(\text{arcSin}\left(-\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) \end{array}\right], \quad , \left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{4}{9}\right) + \text{arcSin}\left(\frac{-4}{5}\right)\right) = \frac{\sqrt{65}}{15} - \frac{16}{45}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{3}{7}\right) + \text{arcSin}\left(\frac{1}{2}\right)\right) = \frac{3\sqrt{3}}{14} - \frac{\sqrt{10}}{7}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{4}{9}\right)\right) = \frac{8\sqrt{65}}{81}\right) & .4 = \left(\cos\left(2\,\text{arcSin}\left(\frac{5}{6}\right)\right) = \frac{-7}{18}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(6\pi) + \text{Sin}\left(\frac{23\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{13\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{5\pi}{6}\right)\right)\right) = 2\right) \end{array}\right], \quad , \left[\begin{matrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{matrix}\right]$$

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

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

TrigonometryExercise5 Answers for No.11947

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

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

$$Ans3=\begin{bmatrix} .1=\left(\mathrm{Tan}\left(\arccos\left(\frac{-1}{2}\right)\right)=-\sqrt{3}\right) & .2=\left(\mathrm{Cos}\left(\arcsin\left(\frac{-2}{5}\right)\right)=\frac{\sqrt{21}}{5}\right) & .3=\left(\mathrm{Csc}\left(\arccos\left(-\frac{\sqrt{3}}{5}\right)\right)=\frac{5\sqrt{22}}{22}\right)\\ .4=\left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{3}}{5}\right)\right)=\frac{5\sqrt{7}}{14}\right) & .5=\left(\mathrm{Sin}\left(\arctan\left(\frac{-4}{5}\right)\right)=-\frac{4\sqrt{41}}{41}\right) & .6=\left(\mathrm{Cot}\left(\arctan\left(\frac{3}{4}\right)\right)=\frac{4}{3}\right)\\ .7=\left(\mathrm{Sec}\left(\arcsin\left(\frac{3}{8}\right)\right)=\frac{8\sqrt{55}}{55}\right) & .8=\left(\mathrm{Sin}\left(\arccos\left(\frac{3}{7}\right)\right)=\frac{2\sqrt{10}}{7}\right) & .9=\left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{7}}{12}\right)\right)=-\frac{\sqrt{137}\sqrt{7}}{137}\right)\end{bmatrix}, \ , \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

$$Ans4=\begin{bmatrix} .1=\left(\mathrm{Sin}\left(\arccos\left(\frac{1}{2}\right)+\arcsin\left(\frac{1}{2}\right)\right)=1\right) & .2=\left(\mathrm{Cos}\left(\arccos\left(\frac{4}{9}\right)+\arcsin\left(\frac{-2}{5}\right)\right)=\frac{4\sqrt{21}}{45}+\frac{2\sqrt{65}}{45}\right)\\ .3=\left(\mathrm{Sin}\left(2\arcsin\left(\frac{3}{7}\right)\right)=\frac{12\sqrt{10}}{49}\right) & .4=\left(\cos\left(2\arcsin\left(\frac{3}{7}\right)\right)=\frac{31}{49}\right)\\ .5=\left(\arctan\left(\mathrm{Cos}(8\pi)+\mathrm{Sin}\left(\frac{11\pi}{2}\right)\right)=0\right) & .6=\left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right)+\arcsin\left(\mathrm{Cos}\left(\frac{4\pi}{3}\right)\right)\right)=\frac{2\sqrt{3}}{3}\right)\end{bmatrix}, \ , \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11989

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

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

$$Ans3=\begin{bmatrix} .1=\left(\mathrm{Cot}\left(\arcsin\left(\frac{\sqrt{3}}{5}\right)\right)=\frac{\sqrt{3}\sqrt{22}}{3}\right) & .2=\left(\mathrm{Sin}\left(\arctan\left(\frac{-5}{6}\right)\right)=-\frac{5\sqrt{61}}{61}\right) & .3=\left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{5}}{9}\right)\right)=-\frac{9\sqrt{5}}{5}\right)\\ .4=\left(\mathrm{Cos}\left(\arctan\left(\frac{5}{3}\right)\right)=\frac{3\sqrt{34}}{34}\right) & .5=\left(\mathrm{Cos}\left(\arcsin\left(\frac{-2}{5}\right)\right)=\frac{\sqrt{21}}{5}\right) & .6=\left(\mathrm{Sin}\left(\arccos\left(\frac{-2}{3}\right)\right)=\frac{\sqrt{5}}{3}\right)\\ .7=\left(\mathrm{Csc}\left(\arctan\left(\frac{\sqrt{6}}{5}\right)\right)=\frac{\sqrt{31}\sqrt{6}}{6}\right) & .8=\left(\mathrm{Tan}\left(\arccos\left(\frac{4}{7}\right)\right)=\frac{\sqrt{33}}{4}\right) & .9=\left(\mathrm{Tan}\left(\arcsin\left(\frac{3}{5}\right)\right)=\frac{3}{4}\right)\end{bmatrix}, \ , \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

$$Ans4=\begin{bmatrix} .1=\left(\mathrm{Sin}\left(\arccos\left(\frac{1}{3}\right)+\arcsin\left(\frac{-5}{8}\right)\right)=\frac{\sqrt{2}\sqrt{39}}{12}-\frac{5}{24}\right) & .2=\left(\mathrm{Cos}\left(\arccos\left(\frac{2}{3}\right)+\arcsin\left(\frac{3}{8}\right)\right)=\frac{\sqrt{55}}{12}-\frac{\sqrt{5}}{8}\right)\\ .3=\left(\mathrm{Sin}\left(2\arccos\left(\frac{4}{5}\right)\right)=\frac{24}{25}\right) & .4=\left(\cos\left(2\arcsin\left(\frac{1}{2}\right)\right)=\frac{1}{2}\right)\\ .5=\left(\arctan(\mathrm{Cos}(3\pi)+\mathrm{Sin}(2\pi))=-\frac{\pi}{4}\right) & .6=\left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{7\pi}{6}\right)\right)+\arcsin\left(\mathrm{Cos}\left(-\frac{2\pi}{3}\right)\right)\right)=\frac{2\sqrt{3}}{3}\right)\end{bmatrix}, \ , \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11996

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cos}\left(\arctan\left(\frac{5}{7}\right)\right) = \frac{7\sqrt{74}}{74}\right) & .2 = \left(\mathrm{Sec}\left(\arcsin\left(-\frac{\sqrt{3}}{5}\right)\right) = \frac{5\sqrt{22}}{22}\right) & .3 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) \\ .4 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{5}\right)\right) = \frac{3}{5}\right) & .5 = \left(\mathrm{Tan}\left(\arccos\left(-\frac{\sqrt{3}}{8}\right)\right) = -\frac{\sqrt{61}\sqrt{3}}{3}\right) & .6 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{4}{9}\right)\right) = \frac{4\sqrt{65}}{65}\right) \\ .7 = \left(\mathrm{Csc}\left(\arccos\left(\frac{-2}{3}\right)\right) = \frac{3\sqrt{5}}{5}\right) & .8 = \left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{3}\sqrt{13}}{26}\right) & .9 = \left(\mathrm{Cot}\left(\arctan\left(\frac{-3}{4}\right)\right) = \frac{-4}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{5} - \frac{8}{15}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{3}{7}\right) + \arcsin\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{7} - \frac{4\sqrt{10}}{21}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{3}{7}\right)\right) = \frac{12\sqrt{10}}{49}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{1}{2}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{7\pi}{2}\right) + \mathrm{Sin}\left(\frac{7\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(-\frac{13\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12889

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sec}\left(\arccos\left(\frac{1}{4}\right)\right) = 4\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-1}{6}\right)\right) = \frac{\sqrt{35}}{6}\right) & .3 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-2}{7}\right)\right) = -\frac{2\sqrt{5}}{15}\right) \\ .4 = \left(\mathrm{Cot}(\arctan(\sqrt{3})) = \frac{\sqrt{3}}{3}\right) & .5 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-1}{7}\right)\right) = -\frac{\sqrt{2}}{10}\right) & .6 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{59}}{8}\right) \\ .7 = \left(\mathrm{Cos}(\arctan(3)) = \frac{\sqrt{10}}{10}\right) & .8 = \left(\mathrm{Tan}\left(\arccos\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{\sqrt{3}\sqrt{13}}{3}\right) & .9 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{4}{5}\right)\right) = \frac{5}{4}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{6}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{35}\sqrt{3}}{12} + \frac{1}{12}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{2}{5}\right) + \arcsin\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{11}}{15} + \frac{\sqrt{21}}{6}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{5}{9}\right)\right) = \frac{31}{81}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(2\pi) + \mathrm{Sin}\left(-\frac{5\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{4\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12890

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\tan\left(\arccos\left(\frac{-3}{5}\right)\right) = \frac{-4}{3}\right) & .2 = \left(\cot\left(\arctan\left(\frac{-5}{2}\right)\right) = \frac{-2}{5}\right) & .3 = \left(\csc\left(\arccos\left(-\frac{\sqrt{5}}{9}\right)\right) = \frac{9\sqrt{19}}{38}\right) \\ .4 = \left(\sec\left(\arcsin\left(\frac{5}{7}\right)\right) = \frac{7\sqrt{6}}{12}\right) & .5 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{7}}{11}\right)\right) = -\frac{\sqrt{7}\sqrt{114}}{114}\right) & .6 = \left(\cos\left(\arcsin\left(\frac{-4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) \\ .7 = \left(\cos(\arctan(\sqrt{6})) = \frac{\sqrt{7}}{7}\right) & .8 = \left(\sin\left(\arctan\left(\frac{1}{5}\right)\right) = \frac{\sqrt{26}}{26}\right) & .9 = \left(\sin\left(\arccos\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{5}{8}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{39}\sqrt{3}}{16} + \frac{5}{16}\right) & .2 = \left(\cos\left(\arccos\left(\frac{3}{7}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{3\sqrt{3}}{14} + \frac{\sqrt{10}}{7}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{5}\right)\right) = \frac{-17}{25}\right) \\ .5 = \left(\arctan\left(\cos(3\pi) + \sin\left(-\frac{11\pi}{2}\right)\right) = 0\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(\frac{17\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{4\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12891

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\cos\left(\arctan\left(\frac{7}{3}\right)\right) = \frac{3\sqrt{58}}{58}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{2}{7}\right)\right) = \frac{3\sqrt{5}}{7}\right) & .3 = \left(\sin\left(\arccos\left(-\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) \\ .4 = \left(\csc\left(\arcsin\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{7\sqrt{2}}{2}\right) & .5 = \left(\tan\left(\arcsin\left(\frac{-1}{4}\right)\right) = -\frac{\sqrt{15}}{15}\right) & .6 = \left(\sec\left(\arctan\left(-\frac{\sqrt{7}}{5}\right)\right) = \frac{4\sqrt{2}}{5}\right) \\ .7 = \left(\cot\left(\arccos\left(\frac{3}{5}\right)\right) = \frac{3}{4}\right) & .8 = \left(\tan\left(\arccos\left(\frac{-3}{4}\right)\right) = -\frac{\sqrt{7}}{3}\right) & .9 = \left(\sin\left(\arctan\left(\frac{-4}{7}\right)\right) = -\frac{4\sqrt{65}}{65}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{5}{7}\right) + \arcsin\left(\frac{-5}{7}\right)\right) = \frac{-1}{49}\right) & .2 = \left(\cos\left(\arccos\left(\frac{3}{7}\right) + \arcsin\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{28} - \frac{3\sqrt{10}}{14}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{5}{8}\right)\right) = \frac{5\sqrt{39}}{32}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{7}\right)\right) = \frac{-31}{49}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{7\pi}{2}\right) + \sin\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{2\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12917

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\tan\left(\arcsin\left(\frac{2}{5}\right)\right) = \frac{2\sqrt{21}}{21}\right) & .2 = \left(\sec\left(\arcsin\left(\frac{-4}{9}\right)\right) = \frac{9\sqrt{65}}{65}\right) & .3 = \left(\sin\left(\arccos\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) \\ .4 = \left(\cos\left(\arctan\left(\frac{-5}{6}\right)\right) = \frac{6\sqrt{61}}{61}\right) & .5 = \left(\tan\left(\arccos\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{5}\sqrt{59}}{5}\right) & .6 = \left(\cos\left(\arcsin\left(-\frac{\sqrt{5}}{8}\right)\right) = \frac{\sqrt{59}}{8}\right) \\ .7 = \left(\csc\left(\arccos\left(\frac{1}{6}\right)\right) = \frac{6\sqrt{35}}{35}\right) & .8 = \left(\sin\left(\arctan\left(-\frac{\sqrt{5}}{3}\right)\right) = -\frac{\sqrt{14}\sqrt{5}}{14}\right) & .9 = \left(\cot(\arctan(6)) = \frac{1}{6}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{5}{8}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{39}\sqrt{3}}{16} + \frac{5}{16}\right) & .2 = \left(\cos\left(\arccos\left(\frac{4}{9}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{2\sqrt{3}}{9} + \frac{\sqrt{65}}{18}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{5}\right)\right) = \frac{-23}{25}\right) \\ .5 = \left(\arctan(\cos(2\pi) + \sin(-5\pi)) = \frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{10\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.13099

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\sin\left(\arctan\left(-\frac{\sqrt{5}}{4}\right)\right) = -\frac{\sqrt{5}\sqrt{21}}{21}\right) & .2 = \left(\cot\left(\arctan\left(\frac{-7}{6}\right)\right) = \frac{-6}{7}\right) & .3 = \left(\tan\left(\arcsin\left(\frac{-1}{2}\right)\right) = -\frac{\sqrt{3}}{3}\right) \\ .4 = \left(\csc\left(\arcsin\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{6\sqrt{5}}{5}\right) & .5 = \left(\cos\left(\arcsin\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) & .6 = \left(\cos\left(\arctan\left(\frac{6}{5}\right)\right) = \frac{5\sqrt{61}}{61}\right) \\ .7 = \left(\tan\left(\arccos\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{\sqrt{31}\sqrt{5}}{5}\right) & .8 = \left(\sin\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{7}\right) & .9 = \left(\sec\left(\arccos\left(\frac{-5}{7}\right)\right) = \frac{-7}{5}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{4}\right) + \arcsin\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{15}\sqrt{5}}{12} - \frac{1}{6}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{9} - \frac{4\sqrt{2}}{9}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{4}{7}\right)\right) = \frac{8\sqrt{33}}{49}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{4}{5}\right)\right) = \frac{7}{25}\right) \\ .5 = \left(\arctan\left(\cos(5\pi) + \sin\left(-\frac{7\pi}{2}\right)\right) = 0\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(\frac{7\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.13100

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{-4}{9}\right)\right) = \frac{9\sqrt{65}}{65}\right) & .2 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .3 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{-2}{7}\right)\right) = -\frac{2\sqrt{53}}{53}\right) \\ .4 = \left(\text{Csc}\left(\text{arcTan}\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{19}\sqrt{3}}{3}\right) & .5 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{-4}{7}\right)\right) = -\frac{\sqrt{33}}{4}\right) & .6 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{1}{4}\right)\right) = \frac{4\sqrt{17}}{17}\right) \\ .7 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{7}\right) & .8 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{47}}{7}\right) & .9 = \left(\text{Cot}\left(\text{arcCos}\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{\sqrt{2}\sqrt{47}}{47}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{-1}{5}\right)\right) = \frac{\sqrt{3}\sqrt{6}}{5} - \frac{1}{10}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{5}\right) + \text{arcSin}\left(\frac{1}{3}\right)\right) = \frac{2\sqrt{2}}{15} - \frac{2\sqrt{6}}{15}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcSin}\left(\frac{2}{5}\right)\right) = \frac{4\sqrt{21}}{25}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}\left(\frac{7\pi}{2}\right) + \text{Sin}\left(\frac{7\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(-\frac{2\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.13139

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Sec}\left(\text{arcSin}\left(\frac{5}{6}\right)\right) = \frac{6\sqrt{11}}{11}\right) & .2 = \left(\text{Sin}\left(\text{arcTan}\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{\sqrt{19}\sqrt{3}}{19}\right) & .3 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{3}{7}\right)\right) = \frac{7\sqrt{58}}{58}\right) \\ .4 = \left(\text{Cot}\left(\text{arcTan}\left(\frac{-1}{2}\right)\right) = -2\right) & .5 = \left(\text{Csc}\left(\text{arcCos}\left(\frac{3}{4}\right)\right) = \frac{4\sqrt{7}}{7}\right) & .6 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{3}\sqrt{13}}{3}\right) \\ .7 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .8 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{\sqrt{5}\sqrt{19}}{38}\right) & .9 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{3}{4}\right) + \text{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{7}\sqrt{3}}{8} - \frac{3}{8}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{4}\right) + \text{arcSin}\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{12} - \frac{\sqrt{15}}{6}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\,\text{arcCos}\left(\frac{3}{5}\right)\right) = \frac{-7}{25}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(8\pi) + \text{Sin}\left(-\frac{9\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Csc}\left(\text{arcCos}\left(\text{Sin}\left(\frac{11\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{13\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \; , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.13411

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\sec\left(\arccos\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{4\sqrt{3}}{3}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) & .3 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{5}}{9}\right)\right) = -\frac{\sqrt{5}\sqrt{19}}{38}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{3}{7}\right)\right) = \frac{2\sqrt{10}}{3}\right) & .5 = \left(\cot\left(\arctan\left(-\frac{\sqrt{2}}{7}\right)\right) = -\frac{7\sqrt{2}}{2}\right) & .6 = \left(\csc\left(\arcsin\left(\frac{-3}{7}\right)\right) = \frac{-7}{3}\right) \\ .7 = \left(\sin\left(\arctan\left(\frac{1}{5}\right)\right) = \frac{\sqrt{26}}{26}\right) & .8 = \left(\sin\left(\arccos\left(\frac{-3}{5}\right)\right) = \frac{4}{5}\right) & .9 = \left(\cos(\arctan(-6)) = \frac{\sqrt{37}}{37}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{2}{7}\right) + \arcsin\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}\sqrt{5}}{14} + \frac{5}{21}\right) & .2 = \left(\cos\left(\arccos\left(\frac{3}{4}\right) + \arcsin\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{11}}{8} + \frac{5\sqrt{7}}{24}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{4}{5}\right)\right) = \frac{7}{25}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{5\pi}{2}\right) + \sin\left(-\frac{9\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\csc\left(\arccos\left(\sin\left(\frac{13\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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