TrigonometryExercise5 Answers for No.9395

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sec}\left(\mathrm{arcCos}\left(\frac{5}{6}\right)\right) = \frac{6}{5}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{5}}{7}\right) & .3 = \left(\mathrm{Cot}\left(\mathrm{arcSin}\left(\frac{2}{7}\right)\right) = \frac{3\sqrt{5}}{2}\right) \\ .4 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{\sqrt{5}\sqrt{19}}{38}\right) & .5 = \left(\mathrm{Csc}(\mathrm{arcTan}(\sqrt{2})) = \frac{\sqrt{3}\sqrt{2}}{2}\right) & .6 = \left(\mathrm{Cos}(\mathrm{arcTan}(-5)) = \frac{\sqrt{26}}{26}\right) \\ .7 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}\sqrt{3}}{3}\right) & .8 = \left(\mathrm{Sin}\left(\mathrm{arcTan}\left(\frac{6}{7}\right)\right) = \frac{6\sqrt{85}}{85}\right) & .9 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{-2}{7}\right)\right) = \frac{3\sqrt{5}}{7}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{1}{3}\right) + \mathrm{arcSin}\left(\frac{-5}{6}\right)\right) = \frac{\sqrt{2}\sqrt{11}}{9} - \frac{5}{18}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcCos}\left(\frac{1}{3}\right) + \mathrm{arcSin}\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{9} - \frac{4\sqrt{2}}{9}\right) \\ .3 = \left(\mathrm{Sin}\left(2\,\mathrm{arcSin}\left(\frac{5}{6}\right)\right) = \frac{5\sqrt{11}}{18}\right) & .4 = \left(\cos\left(2\,\mathrm{arcCos}\left(\frac{5}{9}\right)\right) = \frac{-31}{81}\right) \\ .5 = \left(\mathrm{arcTan}(\mathrm{Cos}(\pi) + \mathrm{Sin}(-5\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\mathrm{arcCos}\left(\mathrm{Sin}\left(-\frac{17\pi}{6}\right)\right) + \mathrm{arcSin}\left(\mathrm{Cos}\left(\frac{13\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.9419

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cot}\left(\mathrm{arcCos}\left(\frac{-4}{5}\right)\right) = \frac{-4}{3}\right) & .2 = \left(\mathrm{Cos}\left(\mathrm{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .3 = \left(\mathrm{Sec}\left(\mathrm{arcSin}\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{3\sqrt{7}}{7}\right) \\ .4 = \left(\mathrm{Sin}(\mathrm{arcTan}(7)) = \frac{7\sqrt{2}}{10}\right) & .5 = \left(\mathrm{Cos}\left(\mathrm{arcTan}\left(\frac{\sqrt{5}}{2}\right)\right) = \frac{2}{3}\right) & .6 = \left(\mathrm{Tan}\left(\mathrm{arcSin}\left(\frac{2}{5}\right)\right) = \frac{2\sqrt{21}}{21}\right) \\ .7 = \left(\mathrm{Tan}\left(\mathrm{arcCos}\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{\sqrt{115}\sqrt{6}}{6}\right) & .8 = \left(\mathrm{Csc}\left(\mathrm{arcTan}\left(\frac{-3}{5}\right)\right) = -\frac{\sqrt{34}}{3}\right) & .9 = \left(\mathrm{Sin}\left(\mathrm{arcCos}\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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

TrigonometryExercise5 Answers for No.9428

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\sec\left(\arcsin\left(\frac{2}{5}\right)\right) = \frac{5\sqrt{21}}{21}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{-1}{5}\right)\right) = \frac{2\sqrt{6}}{5}\right) & .3 = \left(\tan\left(\arcsin\left(-\frac{\sqrt{5}}{7}\right)\right) = -\frac{\sqrt{5}\sqrt{11}}{22}\right) \\ .4 = \left(\tan\left(\arccos\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{3}\right) & .5 = \left(\csc\left(\arccos\left(\frac{-1}{4}\right)\right) = \frac{4\sqrt{15}}{15}\right) & .6 = \left(\sin\left(\arccos\left(-\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) \\ .7 = \left(\sin\left(\arctan\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{\sqrt{3}\sqrt{19}}{19}\right) & .8 = \left(\cot(\arctan(-2)) = \frac{-1}{2}\right) & .9 = \left(\cos\left(\arctan\left(\frac{7}{3}\right)\right) = \frac{3\sqrt{58}}{58}\right) \end{array}\right], \; , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

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

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

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

TrigonometryExercise5 Answers for No.9459

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\sin\left(\arctan\left(\frac{1}{6}\right)\right) = \frac{\sqrt{37}}{37}\right) & .2 = \left(\cos\left(\arctan\left(-\frac{\sqrt{5}}{4}\right)\right) = \frac{4\sqrt{21}}{21}\right) & .3 = \left(\sin\left(\arccos\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) \\ .4 = \left(\tan\left(\arcsin\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{\sqrt{5}\sqrt{19}}{38}\right) & .5 = \left(\csc\left(\arctan\left(\frac{-4}{7}\right)\right) = -\frac{\sqrt{65}}{4}\right) & .6 = \left(\sec\left(\arcsin\left(\frac{-1}{6}\right)\right) = \frac{6\sqrt{35}}{35}\right) \\ .7 = \left(\tan\left(\arccos\left(\frac{-1}{5}\right)\right) = -2\sqrt{6}\right) & .8 = \left(\cos\left(\arcsin\left(\frac{1}{4}\right)\right) = \frac{\sqrt{15}}{4}\right) & .9 = \left(\cot\left(\arccos\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{\sqrt{115}\sqrt{6}}{115}\right) \end{array}\right], \; , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\sin\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{4}{7}\right)\right) = \frac{\sqrt{3}\sqrt{33}}{14} + \frac{2}{7}\right) & .2 = \left(\cos\left(\arccos\left(\frac{2}{5}\right) + \arcsin\left(\frac{-2}{7}\right)\right) = \frac{6\sqrt{5}}{35} + \frac{2\sqrt{21}}{35}\right) \\ .3 = \left(\sin\left(2\arccos\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{2}{3}\right)\right) = \frac{-1}{9}\right) \\ .5 = \left(\arctan(\cos(5\pi) + \sin(5\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\cot\left(\arccos\left(\sin\left(-\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{2\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{array}\right], \; , \left[\begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array}\right]$$

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

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

TrigonometryExercise5 Answers for No.9476

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\cos\left(\arctan\left(\frac{-6}{5}\right)\right) = \frac{5\sqrt{61}}{61}\right) & .2 = \left(\cos\left(\arcsin\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{13}}{4}\right) & .3 = \left(\tan\left(\arcsin\left(\frac{-5}{7}\right)\right) = -\frac{5\sqrt{6}}{12}\right) \\ .4 = \left(\sin\left(\arctan\left(\frac{\sqrt{6}}{7}\right)\right) = \frac{\sqrt{6}\sqrt{55}}{55}\right) & .5 = \left(\sin\left(\arccos\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{8}\right) & .6 = \left(\sec\left(\arccos\left(\frac{\sqrt{5}}{8}\right)\right) = \frac{8\sqrt{5}}{5}\right) \\ .7 = \left(\csc\left(\arcsin\left(\frac{1}{6}\right)\right) = 6\right) & .8 = \left(\tan\left(\arccos\left(\frac{-3}{4}\right)\right) = -\frac{\sqrt{7}}{3}\right) & .9 = \left(\cot\left(\arctan\left(\frac{5}{7}\right)\right) = \frac{7}{5}\right) \end{bmatrix}, \; , \; [M\ a\ t\ h\ @\ M\ U\ T]$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{2}{3}\right) + \arcsin\left(\frac{3}{8}\right)\right) = \frac{\sqrt{5}\sqrt{55}}{24} + \frac{1}{4}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{4}{9}\right)\right) = \frac{8\sqrt{65}}{81}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan\left(\cos\left(\frac{9\pi}{2}\right) + \sin\left(-\frac{9\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\sec\left(\arccos\left(\sin\left(-\frac{13\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \; , \; [M\ a\ t\ h\ @\ M\ U\ T]$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \; , \; [M\ U\ T]$$

$$Ans6 = 2\alpha^2 - 1, \; , \; [M\ U\ T]$$

TrigonometryExercise5 Answers for No.9491

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\csc(\arctan(2)) = \frac{\sqrt{5}}{2}\right) & .2 = \left(\cot\left(\arccos\left(\frac{-5}{7}\right)\right) = -\frac{5\sqrt{6}}{12}\right) & .3 = \left(\cos\left(\arcsin\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) \\ .4 = \left(\sin\left(\arctan\left(\frac{-7}{3}\right)\right) = -\frac{7\sqrt{58}}{58}\right) & .5 = \left(\sin\left(\arccos\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .6 = \left(\tan\left(\arcsin\left(\frac{2}{3}\right)\right) = \frac{2\sqrt{5}}{5}\right) \\ .7 = \left(\sec\left(\arcsin\left(\frac{\sqrt{2}}{7}\right)\right) = \frac{7\sqrt{47}}{47}\right) & .8 = \left(\tan\left(\arccos\left(\frac{\sqrt{5}}{6}\right)\right) = \frac{\sqrt{31}\sqrt{5}}{5}\right) & .9 = \left(\cos(\arctan(-\sqrt{6})) = \frac{\sqrt{7}}{7}\right) \end{bmatrix}, \; , \; [M\ a\ t\ h\ @\ M\ U\ T]$$

$$Ans4 = \begin{bmatrix} .1 = \left(\sin\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{1}{2}\right) & .2 = \left(\cos\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{3}{7}\right)\right) = \frac{\sqrt{10}}{7} - \frac{3\sqrt{3}}{14}\right) \\ .3 = \left(\sin\left(2\arcsin\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{5}{6}\right)\right) = \frac{7}{18}\right) \\ .5 = \left(\arctan\left(\cos(\pi) + \sin\left(\frac{17\pi}{2}\right)\right) = 0\right) & .6 = \left(\sec\left(\arccos\left(\sin\left(\frac{7\pi}{6}\right)\right) + \arcsin\left(\cos\left(-\frac{5\pi}{6}\right)\right)\right) = 2\right) \end{bmatrix}, \; , \; [M\ a\ t\ h\ @\ M\ U\ T]$$

$$Ans5 = 2\alpha\sqrt{1-\alpha^2}, \; , \; [M\ U\ T]$$

$$Ans6 = 2\alpha^2 - 1, \; , \; [M\ U\ T]$$

TrigonometryExercise5 Answers for No.9633

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

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

$$Ans3=\begin{bmatrix} .1=\left(\mathrm{Cos}\left(\arctan\left(\frac{-5}{6}\right)\right)=\frac{6\sqrt{61}}{61}\right) & .2=\left(\mathrm{Sec}\left(\arccos\left(\frac{\sqrt{2}}{5}\right)\right)=\frac{5\sqrt{2}}{2}\right) & .3=\left(\mathrm{Tan}\left(\arccos\left(\frac{-3}{8}\right)\right)=-\frac{\sqrt{55}}{3}\right)\\ .4=\left(\mathrm{Sin}\left(\arctan\left(-\frac{\sqrt{6}}{5}\right)\right)=-\frac{\sqrt{6}\sqrt{31}}{31}\right) & .5=\left(\mathrm{Csc}\left(\arctan\left(\frac{7}{5}\right)\right)=\frac{\sqrt{74}}{7}\right) & .6=\left(\mathrm{Cot}\left(\arcsin\left(\frac{\sqrt{2}}{3}\right)\right)=\frac{\sqrt{7}\sqrt{2}}{2}\right)\\ .7=\left(\mathrm{Tan}\left(\arcsin\left(\frac{-2}{3}\right)\right)=-\frac{2\sqrt{5}}{5}\right) & .8=\left(\mathrm{Sin}\left(\arccos\left(\frac{3}{8}\right)\right)=\frac{\sqrt{55}}{8}\right) & .9=\left(\mathrm{Cos}\left(\arcsin\left(\frac{5}{7}\right)\right)=\frac{2\sqrt{6}}{7}\right)\end{bmatrix}, \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

$$Ans4=\begin{bmatrix} .1=\left(\mathrm{Sin}\left(\arccos\left(\frac{1}{6}\right)+\arcsin\left(\frac{5}{8}\right)\right)=\frac{\sqrt{35}\sqrt{39}}{48}+\frac{5}{48}\right) & .2=\left(\mathrm{Cos}\left(\arccos\left(\frac{1}{5}\right)+\arcsin\left(\frac{-1}{4}\right)\right)=\frac{\sqrt{15}}{20}+\frac{\sqrt{6}}{10}\right)\\ .3=\left(\mathrm{Sin}\left(2\arcsin\left(\frac{2}{5}\right)\right)=\frac{4\sqrt{21}}{25}\right) & .4=\left(\cos\left(2\arcsin\left(\frac{1}{2}\right)\right)=\frac{1}{2}\right)\\ .5=\left(\arctan\left(\mathrm{Cos}(4\pi)+\mathrm{Sin}\left(\frac{7\pi}{2}\right)\right)=0\right) & .6=\left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right)+\arcsin\left(\mathrm{Cos}\left(\frac{8\pi}{3}\right)\right)\right)=\frac{2\sqrt{3}}{3}\right)\end{bmatrix}, \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.9711

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

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

$$Ans3=\begin{bmatrix} .1=\left(\mathrm{Sec}\left(\arccos\left(\frac{3}{7}\right)\right)=\frac{7}{3}\right) & .2=\left(\mathrm{Csc}\left(\arctan\left(\frac{7}{5}\right)\right)=\frac{\sqrt{74}}{7}\right) & .3=\left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{3}}{7}\right)\right)=-\frac{\sqrt{3}\sqrt{46}}{46}\right)\\ .4=\left(\mathrm{Cos}\left(\arcsin\left(\frac{-2}{5}\right)\right)=\frac{\sqrt{21}}{5}\right) & .5=\left(\mathrm{Sin}\left(\arctan\left(\frac{\sqrt{7}}{3}\right)\right)=\frac{\sqrt{7}}{4}\right) & .6=\left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{3}}{7}\right)\right)=\frac{\sqrt{46}}{7}\right)\\ .7=\left(\mathrm{Tan}\left(\arccos\left(\frac{-3}{5}\right)\right)=\frac{-4}{3}\right) & .8=\left(\mathrm{Cos}\left(\arctan\left(\frac{-5}{2}\right)\right)=\frac{2\sqrt{29}}{29}\right) & .9=\left(\mathrm{Cot}\left(\arcsin\left(\frac{1}{6}\right)\right)=\sqrt{35}\right)\end{bmatrix}, \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

$$Ans4=\begin{bmatrix} .1=\left(\mathrm{Sin}\left(\arccos\left(\frac{1}{3}\right)+\arcsin\left(\frac{1}{2}\right)\right)=\frac{\sqrt{3}\sqrt{2}}{3}+\frac{1}{6}\right) & .2=\left(\mathrm{Cos}\left(\arccos\left(\frac{2}{3}\right)+\arcsin\left(\frac{-2}{3}\right)\right)=\frac{4\sqrt{5}}{9}\right)\\ .3=\left(\mathrm{Sin}\left(2\arcsin\left(\frac{3}{8}\right)\right)=\frac{3\sqrt{55}}{32}\right) & .4=\left(\cos\left(2\arccos\left(\frac{5}{7}\right)\right)=\frac{1}{49}\right)\\ .5=\left(\arctan\left(\mathrm{Cos}\left(\frac{3\pi}{2}\right)+\mathrm{Sin}\left(-\frac{7\pi}{2}\right)\right)=\frac{\pi}{4}\right) & .6=\left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{13\pi}{6}\right)\right)+\arcsin\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right)\right)=2\right)\end{bmatrix}, \begin{bmatrix}M\\a\\t\\h\\@\\M\\U\\T\end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.9784

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Cos}\left(\arcTan\left(\frac{-7}{6}\right)\right) = \frac{6\sqrt{85}}{85}\right) & .2 = \left(\mathrm{Cos}\left(\arcSin\left(\frac{-5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .3 = \left(\mathrm{Tan}\left(\arcSin\left(\frac{\sqrt{3}}{8}\right)\right) = \frac{\sqrt{3}\sqrt{61}}{61}\right) \\ .4 = \left(\mathrm{Sec}\left(\arcSin\left(\frac{5}{9}\right)\right) = \frac{9\sqrt{14}}{28}\right) & .5 = \left(\mathrm{Csc}(\arcTan(6)) = \frac{\sqrt{37}}{6}\right) & .6 = \left(\mathrm{Sin}\left(\arcCos\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) \\ .7 = \left(\mathrm{Tan}\left(\arcCos\left(\frac{-1}{6}\right)\right) = -\sqrt{35}\right) & .8 = \left(\mathrm{Sin}\left(\arcTan\left(\frac{\sqrt{7}}{3}\right)\right) = \frac{\sqrt{7}}{4}\right) & .9 = \left(\mathrm{Cot}\left(\arcCos\left(-\frac{\sqrt{2}}{7}\right)\right) = -\frac{\sqrt{2}\sqrt{47}}{47}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arcCos\left(\frac{3}{8}\right) + \arcSin\left(\frac{4}{5}\right)\right) = \frac{3\sqrt{55}}{40} + \frac{3}{10}\right) & .2 = \left(\mathrm{Cos}\left(\arcCos\left(\frac{5}{8}\right) + \arcSin\left(\frac{-5}{6}\right)\right) = \frac{5\sqrt{11}}{48} + \frac{5\sqrt{39}}{48}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcSin\left(\frac{3}{7}\right)\right) = \frac{12\sqrt{10}}{49}\right) & .4 = \left(\cos\left(2\arcCos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arcTan\left(\mathrm{Cos}\left(\frac{9\pi}{2}\right) + \mathrm{Sin}\left(\frac{5\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Cot}\left(\arcCos\left(\mathrm{Sin}\left(-\frac{5\pi}{6}\right)\right) + \arcSin\left(\mathrm{Cos}\left(\frac{5\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.10143

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arcCos\left(\frac{-3}{8}\right)\right) = \frac{8\sqrt{55}}{55}\right) & .2 = \left(\mathrm{Cos}\left(\arcTan\left(\frac{-3}{7}\right)\right) = \frac{7\sqrt{58}}{58}\right) & .3 = (\mathrm{Sec}(\arcTan(1)) = \sqrt{2}) \\ .4 = \left(\mathrm{Sin}\left(\arcTan\left(-\frac{\sqrt{7}}{6}\right)\right) = -\frac{\sqrt{7}\sqrt{43}}{43}\right) & .5 = \left(\mathrm{Sin}\left(\arcCos\left(-\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) & .6 = \left(\mathrm{Cos}\left(\arcSin\left(\frac{-5}{7}\right)\right) = \frac{2\sqrt{6}}{7}\right) \\ .7 = \left(\mathrm{Cot}\left(\arcSin\left(\frac{2}{3}\right)\right) = \frac{\sqrt{5}}{2}\right) & .8 = \left(\mathrm{Tan}\left(\arcSin\left(-\frac{\sqrt{3}}{5}\right)\right) = -\frac{\sqrt{22}\sqrt{3}}{22}\right) & .9 = \left(\mathrm{Tan}\left(\arcCos\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{5}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arcCos\left(\frac{5}{9}\right) + \arcSin\left(\frac{1}{4}\right)\right) = \frac{\sqrt{14}\sqrt{15}}{18} + \frac{5}{36}\right) & .2 = \left(\mathrm{Cos}\left(\arcCos\left(\frac{1}{2}\right) + \arcSin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcCos\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arcSin\left(\frac{3}{8}\right)\right) = \frac{23}{32}\right) \\ .5 = \left(\arcTan\left(\mathrm{Cos}\left(\frac{9\pi}{2}\right) + \mathrm{Sin}\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Csc}\left(\arcCos\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right) + \arcSin\left(\mathrm{Cos}\left(\frac{5\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.10359

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{5\sqrt{3}}{3}\right) & .2 = \left(\mathrm{Cot}\left(\arccos\left(\frac{-5}{8}\right)\right) = -\frac{5\sqrt{39}}{39}\right) & .3 = \left(\mathrm{Tan}\left(\arccos\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{2}\right) \\ .4 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-3}{5}\right)\right) = \frac{-3}{4}\right) & .5 = \left(\mathrm{Sin}(\arctan(-1)) = -\frac{\sqrt{2}}{2}\right) & .6 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{5}}{9}\right)\right) = \frac{2\sqrt{19}}{9}\right) \\ .7 = \left(\mathrm{Sec}\left(\arctan\left(\frac{1}{7}\right)\right) = \frac{5\sqrt{2}}{7}\right) & .8 = \left(\mathrm{Cos}\left(\arctan\left(\frac{\sqrt{3}}{2}\right)\right) = \frac{2\sqrt{7}}{7}\right) & .9 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) \end{array}\right], \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{3}{7}\right) + \arcsin\left(\frac{3}{7}\right)\right) = 1\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{-4}{5}\right)\right) = \frac{1}{5} + \frac{8\sqrt{2}}{15}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{8}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{3}{8}\right)\right) = \frac{-23}{32}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(5\pi) + \mathrm{Sin}\left(\frac{5\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = 2\right) \end{array}\right], \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.10626

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

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

$$Ans3 = \left[\begin{array}{ccc} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-2}{3}\right)\right) = \frac{\sqrt{5}}{3}\right) & .2 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{2}{7}\right)\right) = \frac{2\sqrt{5}}{15}\right) & .3 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) \\ .4 = \left(\mathrm{Cot}\left(\arctan\left(\frac{-7}{3}\right)\right) = \frac{-3}{7}\right) & .5 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{-1}{5}\right)\right) = -5\right) & .6 = \left(\mathrm{Tan}\left(\arccos\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{5}\right) \\ .7 = \left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{6}}{7}\right)\right) = -\frac{7\sqrt{6}}{6}\right) & .8 = \left(\mathrm{Sin}\left(\arctan\left(\frac{4}{5}\right)\right) = \frac{4\sqrt{41}}{41}\right) & .9 = \left(\mathrm{Cos}(\arctan(-\sqrt{6})) = \frac{\sqrt{7}}{7}\right) \end{array}\right], \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \left[\begin{array}{cc} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{3}{4}\right) + \arcsin\left(\frac{4}{5}\right)\right) = \frac{3\sqrt{7}}{20} + \frac{3}{5}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{2}{3}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{\sqrt{3}}{3} + \frac{\sqrt{5}}{6}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(8\pi) + \mathrm{Sin}\left(\frac{19\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Cot}\left(\arccos\left(\mathrm{Sin}\left(\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{5\pi}{6}\right)\right)\right) = \frac{\sqrt{3}}{3}\right) \end{array}\right], \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11002

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{-2}{3}\right)\right) = -\frac{2\sqrt{5}}{5}\right) & .2 = \left(\mathrm{Cos}(\arctan(\sqrt{5})) = \frac{\sqrt{6}}{6}\right) & .3 = \left(\mathrm{Cos}\left(\arcsin\left(-\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{23}}{5}\right) \\ .4 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{14}}{9}\right) & .5 = (\mathrm{Sec}(\arctan(-5)) = \sqrt{26}) & .6 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-1}{2}\right)\right) = -\sqrt{3}\right) \\ .7 = \left(\mathrm{Sin}\left(\arctan\left(\frac{5}{6}\right)\right) = \frac{5\sqrt{61}}{61}\right) & .8 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{4}{5}\right)\right) = \frac{3}{4}\right) & .9 = \left(\mathrm{Csc}\left(\arccos\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{11\sqrt{115}}{115}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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

TrigonometryExercise5 Answers for No.11188

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{6}\right)\right) = \frac{\sqrt{35}}{6}\right) & .2 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{4}{7}\right)\right) = \frac{4\sqrt{33}}{33}\right) & .3 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{7}}{3}\right) \\ .4 = \left(\mathrm{Cos}\left(\arctan\left(-\frac{\sqrt{6}}{5}\right)\right) = \frac{5\sqrt{31}}{31}\right) & .5 = \left(\mathrm{Cot}\left(\arccos\left(\frac{\sqrt{2}}{5}\right)\right) = \frac{\sqrt{2}\sqrt{23}}{23}\right) & .6 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{-5}{8}\right)\right) = \frac{-8}{5}\right) \\ .7 = \left(\mathrm{Sin}\left(\arctan\left(\frac{3}{5}\right)\right) = \frac{3\sqrt{34}}{34}\right) & .8 = \left(\mathrm{Sec}\left(\arctan\left(\frac{-4}{5}\right)\right) = \frac{\sqrt{41}}{5}\right) & .9 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-3}{7}\right)\right) = -\frac{2\sqrt{10}}{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{5}{8}\right) + \arcsin\left(\frac{-4}{5}\right)\right) = \frac{3\sqrt{39}}{40} - \frac{1}{2}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{3}\right) + \arcsin\left(\frac{5}{7}\right)\right) = \frac{2\sqrt{6}}{21} - \frac{10\sqrt{2}}{21}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{3}{4}\right)\right) = \frac{3\sqrt{7}}{8}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{1}{6}\right)\right) = \frac{17}{18}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{3\pi}{2}\right) + \mathrm{Sin}\left(-\frac{7\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(\frac{5\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.11505

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{2}}{5}\right)\right) = -\frac{\sqrt{2}\sqrt{23}}{23}\right) & .2 = \left(\mathrm{Sin}\left(\arctan\left(\frac{-4}{5}\right)\right) = -\frac{4\sqrt{41}}{41}\right) & .3 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{3}{4}\right)\right) = \frac{\sqrt{7}}{4}\right) \\ .4 = \left(\mathrm{Tan}\left(\arccos\left(\frac{3}{8}\right)\right) = \frac{\sqrt{55}}{3}\right) & .5 = \left(\mathrm{Sin}\left(\arccos\left(\frac{\sqrt{3}}{7}\right)\right) = \frac{\sqrt{46}}{7}\right) & .6 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{-5}{8}\right)\right) = -\frac{\sqrt{39}}{5}\right) \\ .7 = \left(\mathrm{Csc}\left(\arctan\left(-\frac{\sqrt{5}}{2}\right)\right) = -\frac{3\sqrt{5}}{5}\right) & .8 = \left(\mathrm{Sec}\left(\arccos\left(\frac{-1}{3}\right)\right) = -3\right) & .9 = \left(\mathrm{Cos}\left(\arctan\left(\frac{1}{3}\right)\right) = \frac{3\sqrt{10}}{10}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{1}{2}\right) + \arcsin\left(\frac{5}{9}\right)\right) = \frac{\sqrt{3}\sqrt{14}}{9} + \frac{5}{18}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{3}{4}\right) + \arcsin\left(\frac{-1}{3}\right)\right) = \frac{\sqrt{2}}{2} + \frac{\sqrt{7}}{12}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{5}\right)\right) = \frac{-23}{25}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}(3\pi) + \mathrm{Sin}\left(-\frac{15\pi}{2}\right)\right) = 0\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{6}\right)\right)\right) = -2\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.12113

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{2}}{5}\right)\right) = -\frac{\sqrt{2}\sqrt{23}}{23}\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(\frac{4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) & .3 = \left(\mathrm{Csc}\left(\arccos\left(-\frac{\sqrt{7}}{9}\right)\right) = \frac{9\sqrt{74}}{74}\right) \\ .4 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .5 = \left(\mathrm{Sec}\left(\arctan\left(-\frac{\sqrt{2}}{3}\right)\right) = \frac{\sqrt{11}}{3}\right) & .6 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{-1}{5}\right)\right) = -2\sqrt{6}\right) \\ .7 = \left(\mathrm{Sin}(\arctan(-5)) = -\frac{5\sqrt{26}}{26}\right) & .8 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-5}{6}\right)\right) = -\frac{\sqrt{11}}{5}\right) & .9 = \left(\mathrm{Cos}\left(\arctan\left(\frac{1}{3}\right)\right) = \frac{3\sqrt{10}}{10}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{3}{5}\right) + \arcsin\left(\frac{-1}{2}\right)\right) = \frac{2\sqrt{3}}{5} - \frac{3}{10}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{1}{5}\right) + \arcsin\left(\frac{5}{8}\right)\right) = \frac{\sqrt{39}}{40} - \frac{\sqrt{6}}{4}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{4}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{3}\right)\right) = \frac{-7}{9}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{7\pi}{2}\right) + \mathrm{Sin}\left(\frac{\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{13\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(-\frac{\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12541

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

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

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

$$Ans4 = \begin{bmatrix} .1 = \left(Sin\left(\arcCos\left(\frac{2}{7}\right) + \arcSin\left(\frac{-1}{5}\right)\right) = \frac{6\sqrt{5}\sqrt{6}}{35} - \frac{2}{35}\right) & .2 = \left(Cos\left(\arcCos\left(\frac{5}{7}\right) + \arcSin\left(\frac{1}{5}\right)\right) = \frac{8\sqrt{6}}{35}\right) \\ .3 = \left(Sin\left(2\arcCos\left(\frac{3}{5}\right)\right) = \frac{24}{25}\right) & .4 = \left(\cos\left(2\arcCos\left(\frac{4}{5}\right)\right) = \frac{7}{25}\right) \\ .5 = \left(\arcTan(Cos(\pi) + Sin(-5\pi)) = -\frac{\pi}{4}\right) & .6 = \left(Csc\left(\arcCos\left(Sin\left(\frac{17\pi}{6}\right)\right) + \arcSin\left(Cos\left(-\frac{\pi}{6}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12590

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(Csc\left(\arcTan\left(\frac{-3}{4}\right)\right) = \frac{-5}{3}\right) & .2 = \left(Cot\left(\arcSin\left(\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}\sqrt{3}}{3}\right) & .3 = \left(Sin\left(\arcCos\left(-\frac{\sqrt{3}}{5}\right)\right) = \frac{\sqrt{22}}{5}\right) \\ .4 = \left(Tan\left(\arcCos\left(\frac{-1}{5}\right)\right) = -2\sqrt{6}\right) & .5 = \left(Tan\left(\arcSin\left(\frac{5}{8}\right)\right) = \frac{5\sqrt{39}}{39}\right) & .6 = \left(Sec\left(\arcCos\left(\frac{3}{4}\right)\right) = \frac{4}{3}\right) \\ .7 = \left(Sin\left(\arcTan\left(\frac{1}{4}\right)\right) = \frac{\sqrt{17}}{17}\right) & .8 = \left(Cos\left(\arcSin\left(\frac{-4}{9}\right)\right) = \frac{\sqrt{65}}{9}\right) & .9 = \left(Cos\left(\arcTan\left(-\frac{\sqrt{5}}{7}\right)\right) = \frac{7\sqrt{6}}{18}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(Sin\left(\arcCos\left(\frac{3}{7}\right) + \arcSin\left(\frac{1}{6}\right)\right) = \frac{\sqrt{10}\sqrt{35}}{21} + \frac{1}{14}\right) & .2 = \left(Cos\left(\arcCos\left(\frac{5}{9}\right) + \arcSin\left(\frac{-1}{6}\right)\right) = \frac{5\sqrt{35}}{54} + \frac{\sqrt{14}}{27}\right) \\ .3 = \left(Sin\left(2\arcSin\left(\frac{1}{2}\right)\right) = \frac{\sqrt{3}}{2}\right) & .4 = \left(\cos\left(2\arcCos\left(\frac{4}{5}\right)\right) = \frac{7}{25}\right) \\ .5 = \left(\arcTan\left(Cos\left(\frac{\pi}{2}\right) + Sin\left(\frac{\pi}{2}\right)\right) = \frac{\pi}{4}\right) & .6 = \left(Cot\left(\arcCos\left(Sin\left(\frac{7\pi}{6}\right)\right) + \arcSin\left(Cos\left(\frac{13\pi}{3}\right)\right)\right) = -\sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12621

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Csc}\left(\arcsin\left(\frac{-1}{3}\right)\right) = -3\right) & .2 = \left(\mathrm{Sin}\left(\arccos\left(-\frac{\sqrt{3}}{8}\right)\right) = \frac{\sqrt{61}}{8}\right) & .3 = \left(\mathrm{Sec}\left(\arctan\left(\frac{-1}{5}\right)\right) = \frac{\sqrt{26}}{5}\right) \\ .4 = \left(\mathrm{Cos}\left(\arctan\left(\frac{2}{5}\right)\right) = \frac{5\sqrt{29}}{29}\right) & .5 = \left(\mathrm{Tan}\left(\arcsin\left(-\frac{\sqrt{2}}{5}\right)\right) = -\frac{\sqrt{2}\sqrt{23}}{23}\right) & .6 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{5}\right) \\ .7 = \left(\mathrm{Tan}\left(\arccos\left(\frac{-5}{8}\right)\right) = -\frac{\sqrt{39}}{5}\right) & .8 = \left(\mathrm{Sin}\left(\arctan\left(-\frac{\sqrt{7}}{2}\right)\right) = -\frac{\sqrt{7}\sqrt{11}}{11}\right) & .9 = \left(\mathrm{Cot}\left(\arccos\left(\frac{2}{7}\right)\right) = \frac{2\sqrt{5}}{15}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{3}{5}\right) + \arcsin\left(\frac{-2}{5}\right)\right) = \frac{4\sqrt{21}}{25} - \frac{6}{25}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{4}{5}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{5} - \frac{3}{10}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arcsin\left(\frac{4}{9}\right)\right) = \frac{8\sqrt{65}}{81}\right) & .4 = \left(\cos\left(2\arcsin\left(\frac{2}{5}\right)\right) = \frac{17}{25}\right) \\ .5 = \left(\arctan\left(\mathrm{Cos}\left(\frac{5\pi}{2}\right) + \mathrm{Sin}\left(\frac{3\pi}{2}\right)\right) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Sec}\left(\arccos\left(\mathrm{Sin}\left(-\frac{11\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \frac{2\sqrt{3}}{3}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

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TrigonometryExercise5 Answers for No.12641

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{-4}{5}\right)\right) = \frac{3}{5}\right) & .2 = \left(\mathrm{Csc}\left(\arctan\left(\frac{\sqrt{5}}{2}\right)\right) = \frac{3\sqrt{5}}{5}\right) & .3 = \left(\mathrm{Sec}\left(\arccos\left(-\frac{\sqrt{3}}{4}\right)\right) = -\frac{4\sqrt{3}}{3}\right) \\ .4 = \left(\mathrm{Cos}\left(\arctan\left(\frac{-1}{2}\right)\right) = \frac{2\sqrt{5}}{5}\right) & .5 = \left(\mathrm{Tan}\left(\arcsin\left(\frac{4}{7}\right)\right) = \frac{4\sqrt{33}}{33}\right) & .6 = \left(\mathrm{Tan}\left(\arccos\left(\frac{2}{5}\right)\right) = \frac{\sqrt{21}}{2}\right) \\ .7 = \left(\mathrm{Cos}\left(\arcsin\left(\frac{-4}{7}\right)\right) = \frac{\sqrt{33}}{7}\right) & .8 = \left(\mathrm{Cot}\left(\arcsin\left(\frac{\sqrt{6}}{11}\right)\right) = \frac{\sqrt{115}\sqrt{6}}{6}\right) & .9 = \left(\mathrm{Sin}(\arctan(2)) = \frac{2\sqrt{5}}{5}\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\mathrm{Sin}\left(\arccos\left(\frac{2}{7}\right) + \arcsin\left(\frac{-3}{8}\right)\right) = \frac{3\sqrt{5}\sqrt{55}}{56} - \frac{3}{28}\right) & .2 = \left(\mathrm{Cos}\left(\arccos\left(\frac{4}{9}\right) + \arcsin\left(\frac{1}{2}\right)\right) = \frac{2\sqrt{3}}{9} - \frac{\sqrt{65}}{18}\right) \\ .3 = \left(\mathrm{Sin}\left(2\arccos\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\cos\left(2\arccos\left(\frac{1}{2}\right)\right) = \frac{-1}{2}\right) \\ .5 = \left(\arctan(\mathrm{Cos}(\pi) + \mathrm{Sin}(\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\mathrm{Csc}\left(\arccos\left(\mathrm{Sin}\left(\frac{7\pi}{6}\right)\right) + \arcsin\left(\mathrm{Cos}\left(\frac{5\pi}{3}\right)\right)\right) = 2\right) \end{bmatrix}, \ , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12674

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{5}{6}\right)\right) = \frac{\sqrt{11}}{6}\right) & .2 = \left(\text{Sin}\left(\text{arcTan}\left(\frac{1}{7}\right)\right) = \frac{\sqrt{2}}{10}\right) & .3 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{-3}{7}\right)\right) = -\frac{2\sqrt{10}}{3}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{-1}{6}\right)\right) = -\frac{\sqrt{35}}{35}\right) & .5 = \left(\text{Cot}\left(\text{arcCos}\left(\frac{1}{3}\right)\right) = \frac{\sqrt{2}}{4}\right) & .6 = \left(\text{Sec}\left(\text{arcTan}\left(\frac{\sqrt{3}}{4}\right)\right) = \frac{\sqrt{19}}{4}\right) \\ .7 = \left(\text{Csc}\left(\text{arcSin}\left(-\frac{\sqrt{7}}{8}\right)\right) = -\frac{8\sqrt{7}}{7}\right) & .8 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{-1}{2}\right)\right) = \frac{2\sqrt{5}}{5}\right) & .9 = \left(\text{Sin}\left(\text{arcCos}\left(-\frac{\sqrt{5}}{7}\right)\right) = \frac{2\sqrt{11}}{7}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{4}{7}\right) + \text{arcSin}\left(\frac{5}{9}\right)\right) = \frac{2\sqrt{33}\sqrt{14}}{63} + \frac{20}{63}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{3}{5}\right) + \text{arcSin}\left(\frac{-1}{2}\right)\right) = \frac{3\sqrt{3}}{10} + \frac{2}{5}\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{2}{3}\right)\right) = \frac{4\sqrt{5}}{9}\right) & .4 = \left(\text{cos}\left(2\,\text{arcCos}\left(\frac{1}{6}\right)\right) = \frac{-17}{18}\right) \\ .5 = \left(\text{arcTan}\left(\text{Cos}(6\pi) + \text{Sin}\left(\frac{11\pi}{2}\right)\right) = 0\right) & .6 = \left(\text{Sec}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{5\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{5\pi}{3}\right)\right)\right) = -\frac{2\sqrt{3}}{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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

TrigonometryExercise5 Answers for No.12728

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

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

$$Ans3 = \begin{bmatrix} .1 = \left(\text{Cot}\left(\text{arcSin}\left(-\frac{\sqrt{5}}{7}\right)\right) = -\frac{2\sqrt{5}\sqrt{11}}{5}\right) & .2 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{-1}{3}\right)\right) = \frac{2\sqrt{2}}{3}\right) & .3 = \left(\text{Tan}\left(\text{arcCos}\left(\frac{1}{2}\right)\right) = \sqrt{3}\right) \\ .4 = \left(\text{Tan}\left(\text{arcSin}\left(\frac{1}{3}\right)\right) = \frac{\sqrt{2}}{4}\right) & .5 = \left(\text{Sec}\left(\text{arcCos}\left(-\frac{\sqrt{5}}{8}\right)\right) = -\frac{8\sqrt{5}}{5}\right) & .6 = \left(\text{Csc}\left(\text{arcTan}\left(\frac{7}{6}\right)\right) = \frac{\sqrt{85}}{7}\right) \\ .7 = \left(\text{Sin}\left(\text{arcTan}\left(-\frac{\sqrt{2}}{3}\right)\right) = -\frac{\sqrt{2}\sqrt{11}}{11}\right) & .8 = \left(\text{Cos}\left(\text{arcSin}\left(\frac{-5}{8}\right)\right) = \frac{\sqrt{39}}{8}\right) & .9 = \left(\text{Cos}\left(\text{arcTan}\left(\frac{-7}{3}\right)\right) = \frac{3\sqrt{58}}{58}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

$$Ans4 = \begin{bmatrix} .1 = \left(\text{Sin}\left(\text{arcCos}\left(\frac{2}{3}\right) + \text{arcSin}\left(\frac{-4}{7}\right)\right) = \frac{\sqrt{5}\sqrt{33}}{21} - \frac{8}{21}\right) & .2 = \left(\text{Cos}\left(\text{arcCos}\left(\frac{1}{2}\right) + \text{arcSin}\left(\frac{1}{2}\right)\right) = 0\right) \\ .3 = \left(\text{Sin}\left(2\,\text{arcCos}\left(\frac{5}{6}\right)\right) = \frac{5\sqrt{11}}{18}\right) & .4 = \left(\text{cos}\left(2\,\text{arcCos}\left(\frac{4}{9}\right)\right) = \frac{-49}{81}\right) \\ .5 = \left(\text{arcTan}(\text{Cos}(\pi) + \text{Sin}(-2\pi)) = -\frac{\pi}{4}\right) & .6 = \left(\text{Cot}\left(\text{arcCos}\left(\text{Sin}\left(-\frac{7\pi}{6}\right)\right) + \text{arcSin}\left(\text{Cos}\left(\frac{10\pi}{3}\right)\right)\right) = \sqrt{3}\right) \end{bmatrix}, , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{bmatrix}$$

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

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