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MAT126 – Technical Math & Trig

Assignment 7 – Show your work!

Convert each of the angle measures from degrees to radians. Round your answers to the correct number of significant figures.

(1) 15°

(2) 163.5°

(3) 48.6°

(4) 242.35°

(5) 338.6°

Convert each of the angle measures from radians to degrees. Round your answers to the correct number of significant figures.

(6) 2.15

(7) 1.14

(8) 4.084

(9) $\frac{4\pi}{3}$ (keep 5 significant figures)

(10) 0.25

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Each point is on the terminal side of an angle, θ , in standard position. Find the six trigonometric functions of the angle associated with each of these points. Leave your answers as fractions reduced to lowest terms.

(11) $(4, 2)$

(12) $(1, -3)$

(13) $(-5, \sqrt{11})$

(14) $(-\sqrt{13}, -6)$

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Determine the point $P(x, y)$ on the terminal side of an angle, θ , in standard position from the information given. Then, determine the value of the 6 trigonometric functions. Leave your answers as fractions reduced to lowest terms

(15) $x = 3, y > 0, r = 5$

(16) $x = -20, y < 0, r = 29$

(17) $x < 0, y = 5, r = 30$

(18) $x > 0, y = -9, r = 15$

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Use a calculator to determine the values of each of the indicated trigonometric functions. Round your answers to the correct number of significant figures.

(19) $\sin(18.6^\circ)$

(23) $\csc(0.43)$

(27) $\tan(126.3^\circ)$

(20) $\cos(314^\circ)$

(24) $\cot(1.21)$

(28) $\sec(2.41)$

(21) $\tan(1.35)$

(25) $\sin(1.38)$

(29) $\csc(213.8^\circ)$

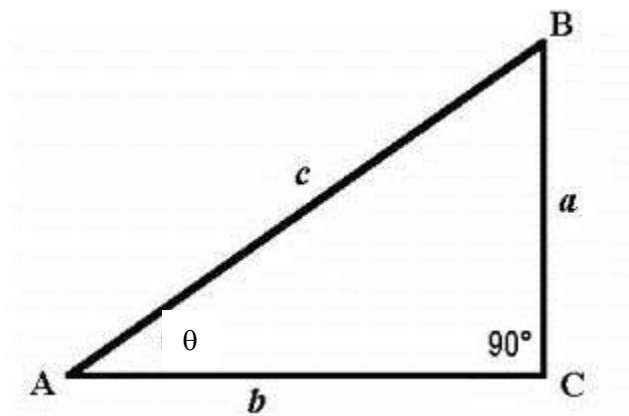
(22) $\sec(19.15^\circ)$

(26) $\cos(3.20)$

(30) $\cot(305^\circ)$

Use the picture of the right triangle and the information given to find the third side of the triangle. Then, find the six trigonometric functions. Write your answer as a decimal rounded to the correct number of significant figures.

(31) $b = 5.0, c = 23$



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(32) $b = 2.10, c = 8.00$

(33) $a = 1.4, b = 2.1$

(34) Suppose you have a right triangle with $\cos \theta = \frac{3}{5}$. Draw the triangle and label the sides. Find the values of the other 5 trigonometric functions. Leave your answers expressed as fractions in simplest terms.

(35) Suppose you have a right triangle with $\tan \theta = \frac{17}{15}$. Draw the triangle and label the sides. Find the values of the other 5 trigonometric functions. Round your answers to 3 significant figures.