

Trigonometric Functions and Right Triangle Trigonometry Worksheet

NAME:

DATE:

1. Find α such that $0^\circ < \alpha < 360^\circ$ and α is co-terminal with θ :

(a) $\theta = 570^\circ$

(b) $\theta = -150^\circ$

2. Find the reference angle θ for each of the given values of θ .

(a) $\theta = 315^\circ$

(b) $\theta = -30^\circ$

3. Find exact values. Do not use a calculator or a table. Remember that the unit circle can be used for such problems

(a) $\cos(120^\circ)$

(c) $\tan\left(\frac{4\pi}{3}\right)$

(b) $\sin(315^\circ)$

(d) $\csc\left(\frac{5\pi}{4}\right)$

4. For the following problems use your calculator to find approximate values for each of the following. Express the values to the nearest ten-thousandth.

(a) $\tan(263.8^\circ)$

(b) $\cos(71.3^\circ)$

5. Solve each of the right triangles expressing lengths of sides to the nearest unit and angles to the nearest degree.

(a) $A = 67^\circ$ and $c = 26$

(b) $b = 12$ and $c = 29$

6. Bill is standing on top of a 175-foot cliff overlooking a lake. The measurement of the angle of depression to a boat on the lake is 29° . How far is the boat from the base of the cliff. Express your answer to the nearest foot.