

TRIG EQUATIONS

1) Solve each equation for $0^\circ \leq x < 360^\circ$ (round to nearest tenth of degree).

a) $\sin x = -1/3$

b) $\cot x = -\sqrt{3}/3$

2) Solve each equation for $0 \leq x < 2\pi$ (round to the nearest hundredth of a radian).

a) $\sin x = \sqrt{2}/2$

b) $\cos x = -2/3$

3) Simplify.

a) $\frac{\sec x}{\tan x}$

b) $(\sec x - 1)(\sec x + 1)$

c) $(\sin x)(\sec x)$

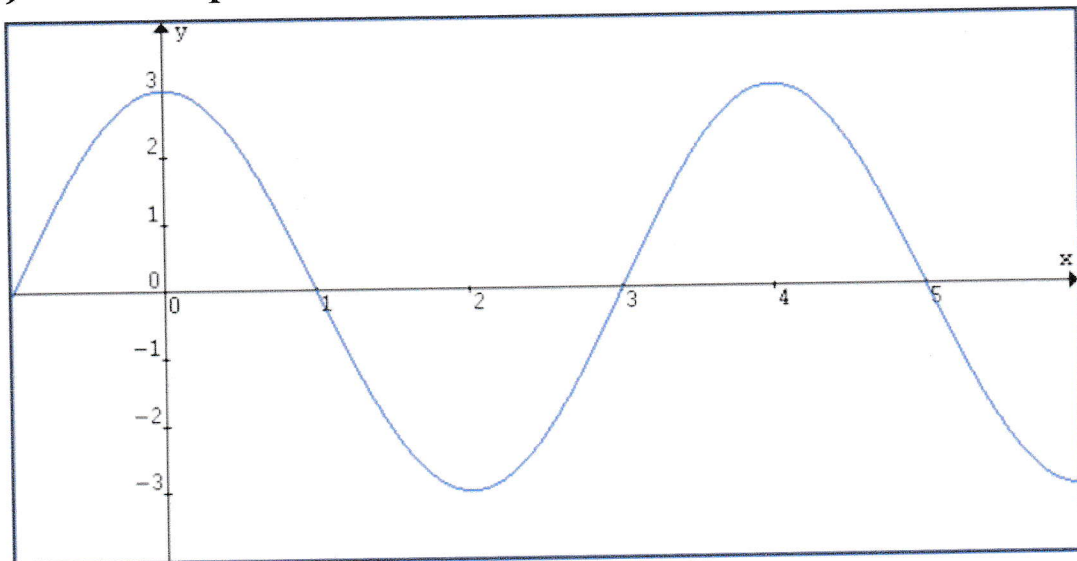
4) Prove.

a) $\tan B = \frac{\sec B}{\csc B}$

b) $\sec x - \tan x = \frac{1 - \sin x}{\cos x}$

5) Solve $5 \sin A - \cos A = 0$, for $0 \leq A < 2\pi$ (round to the nearest hundredth of a radian).

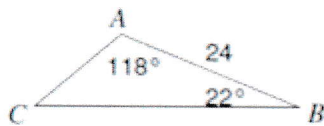
6) Find the equation of the following graph.



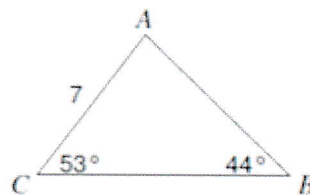
TRIANGLE TRIGONOMETRY

Find each measurement indicated. Round your answers to the nearest tenth.

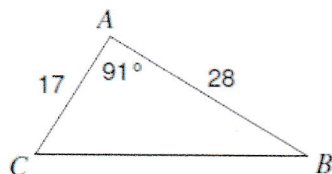
1) Find AC



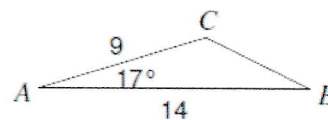
2) Find AB



3) Find BC

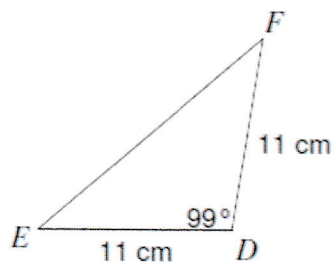


4) Find BC

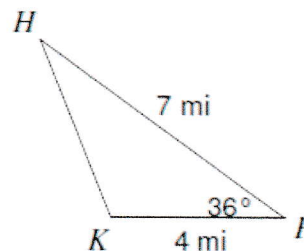


Find the area of the triangle to the nearest tenth.

5)



6)



Solve each triangle. Round your answers to the nearest tenth. HINT: Draw a picture to help you visualize.

7) In $\triangle ABC$, $a = 14$ cm, $b = 9$ cm, $c = 6$ cm

8) In $\triangle ABC$, $C = 13^\circ$, $A = 22^\circ$, $c = 9$ in.

TRIGONOMETRY FORMULAS

Use the angle sum identity to find the exact value of each.

1) $\cos 105^\circ$

2) $\sin 195^\circ$

Use the angle difference identity to find the exact value of each.

3) $\cos 75^\circ$

4) $\sin 105^\circ$

5) Show $\sin 4\theta = 4\sin \theta \cos \theta \cos 2\theta$

6) Solve $5 \cos 2\theta = 1$ for $0^\circ \leq \theta < 360^\circ$

7) Solve $\cos^2 \theta = \cos \theta$ for $0^\circ \leq \theta < 360^\circ$.

8) Solve $\cos 2\theta = \cos \theta + 2$ for $0 \leq \theta < 2\pi$

Use a double-angle or half-angle identity to find the exact value of each expression.

9) $\cot \frac{\pi}{3}$

10) $\cot \frac{2\pi}{3}$

11) $\sec \frac{5\pi}{12}$

12) $\cot 60^\circ$

13) $\cot 240^\circ$

14) $\cot \frac{5\pi}{3}$