Precalculus Quiz

Name_____
Date_____

Solve the following equations for x.

1. $\frac{\sin(68°)}{x} = \frac{\sin(37°)}{3}$

$x =$ _____

2. $\frac{\sin(24°)}{8} = \frac{\sin(x)}{3.75}$

$x =$ _____

3. $23^2 = 37^2 + 18^2 - 2(37)(18)\cos(x)$

$x =$ _____

4. $x^2 = 10^2 + 8^2 - 2(10)(8)\cos(60°)$

$x =$ _____

Find each measure using the given measures of ΔKLM *.*

5. In ΔKLM ; $m = 10.5$, $k = 18.2$, and $m\angle K = 73°$. Find $m\angle M$.

$x =$ _____

6. In ΔKLM ; $m\angle L = 88°$, $m\angle K = 31°$, and $m = 5.4$. Find l .

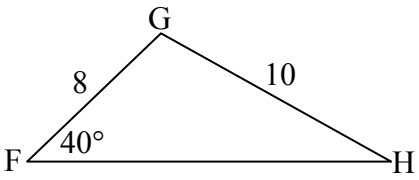
$x =$ _____

7. In ΔKLM ; $m = 11$, $l = 17$, and $m\angle K = 59°$. Find k .

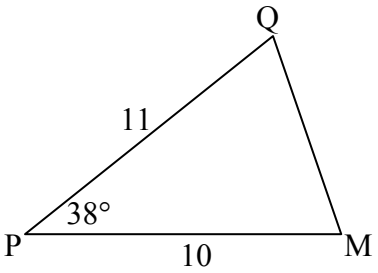
$x =$ _____

Solve each triangle by finding all of the missing side lengths and angle measures..

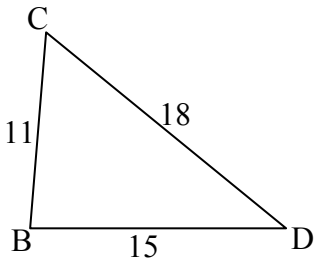
8.



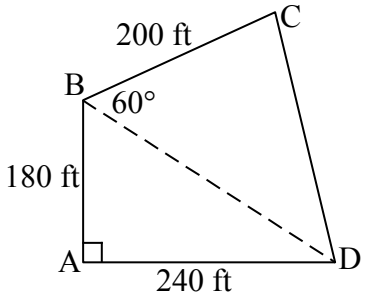
9.



10.



11. Ms. Jenkins is buying some property that is shaped like quadrilateral $ABCD$ below. Find the perimeter of the property.



____12.

Which expression is equivalent to $(\sec\theta)\left(\frac{\sin\theta}{\tan\theta}\right)$?

A $\cos^2\theta - \sin^2\theta$

B $\sin^2\theta - \cos^2\theta$

C $\cot^2\theta - \csc^2\theta$

D $\csc^2\theta - \cot^2\theta$

13.

Prove $1+\cos\theta = \dfrac{\sin^2\theta}{1-\cos\theta}$.