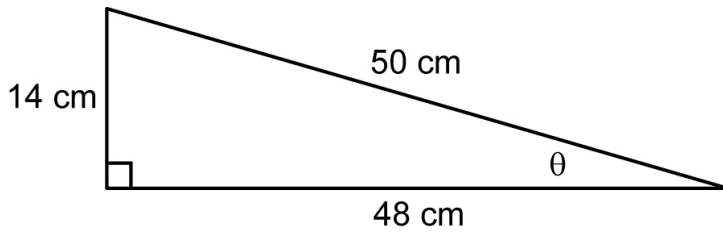


**Unit 6 - Trigonometry**

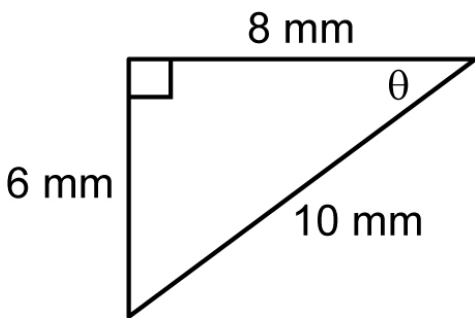
1) Find all three primary trig ratios for each triangle.

a)



$\sin \theta : \underline{\hspace{2cm}}$
$\cos \theta : \underline{\hspace{2cm}}$
$\tan \theta : \underline{\hspace{2cm}}$

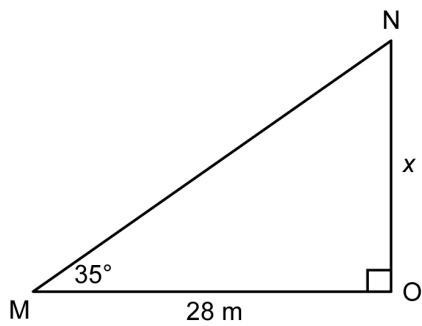
b)



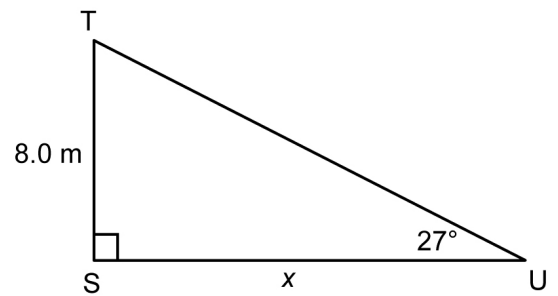
$\sin \theta : \underline{\hspace{2cm}}$
$\cos \theta : \underline{\hspace{2cm}}$
$\tan \theta : \underline{\hspace{2cm}}$

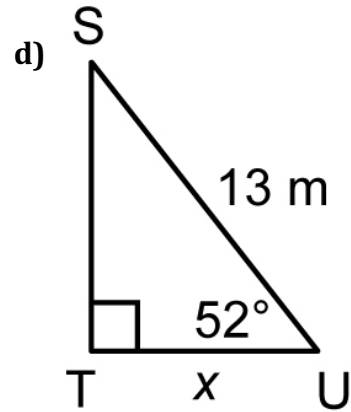
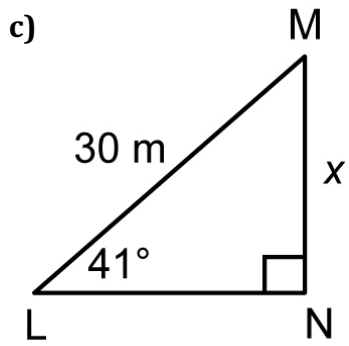
2) Find the length of 'x' to the nearest tenth.

a)



b)





3) Find the measure of each angle, to the nearest tenth of a degree.

a)  $\tan \theta = 0.8173$

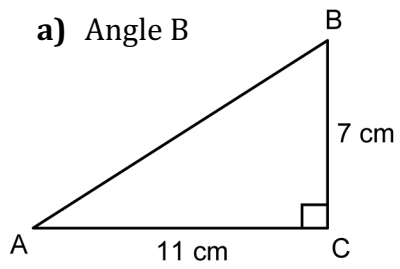
b)  $\sin \theta = 0.4152$

c)  $\cos \theta = \frac{11}{15}$

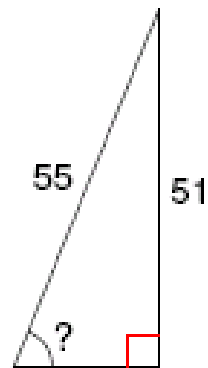
d)  $\tan B = \frac{23}{12}$

4) Find the indicated angle to the nearest tenth of a degree.

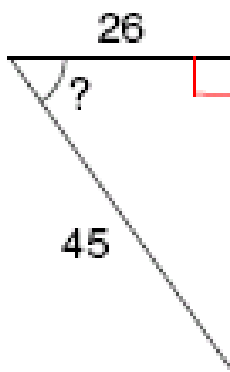
a) Angle B



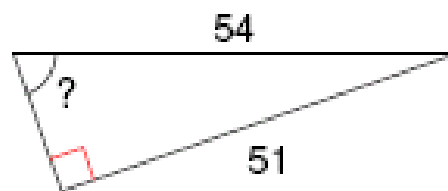
b)



c)

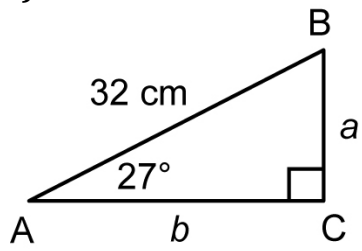


d)



5) Solve the triangle. Round to the nearest tenth of a unit.

a)



$b =$  \_\_\_\_\_

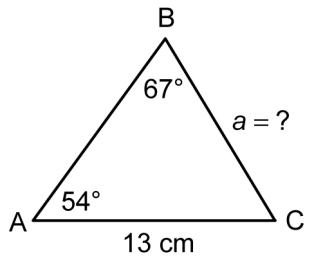
$a =$  \_\_\_\_\_

$\angle B =$  \_\_\_\_\_

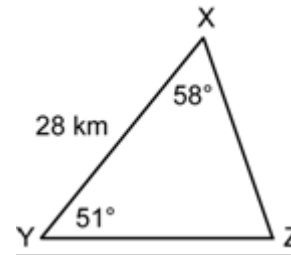
6) The angle of elevation of a ramp is  $4^\circ$ . The horizontal length of the ramp is 18 m. What is the vertical height of the ramp, to the nearest tenth of a meter?

7) Find the indicated side length or angle measure to the nearest tenth of a centimeter.

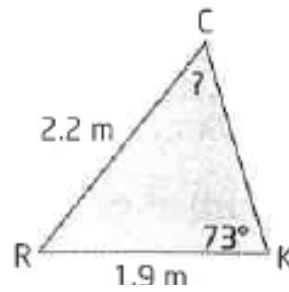
a) Side 'a'



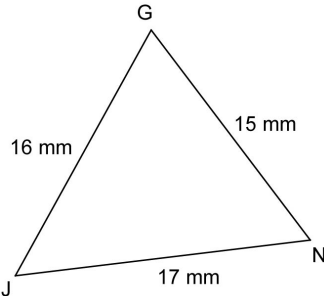
b) side 'y'



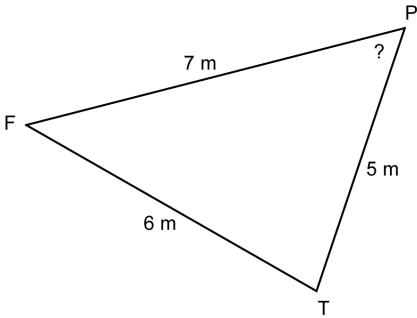
15)d)



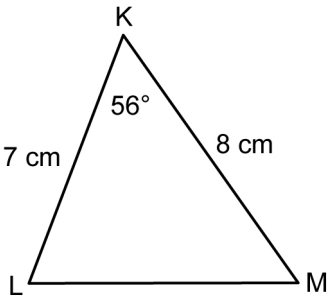
e) Solve for  $\angle G$



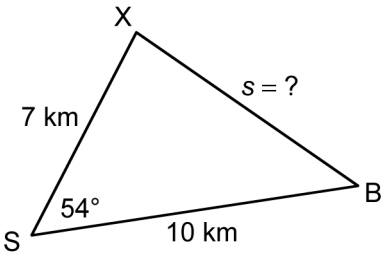
f) Solve for  $\angle P$



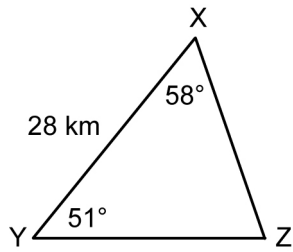
g) Length of side 'k'



h) Length of side 's'



8. Solve the triangle. Round answers to the nearest tenth of a unit.



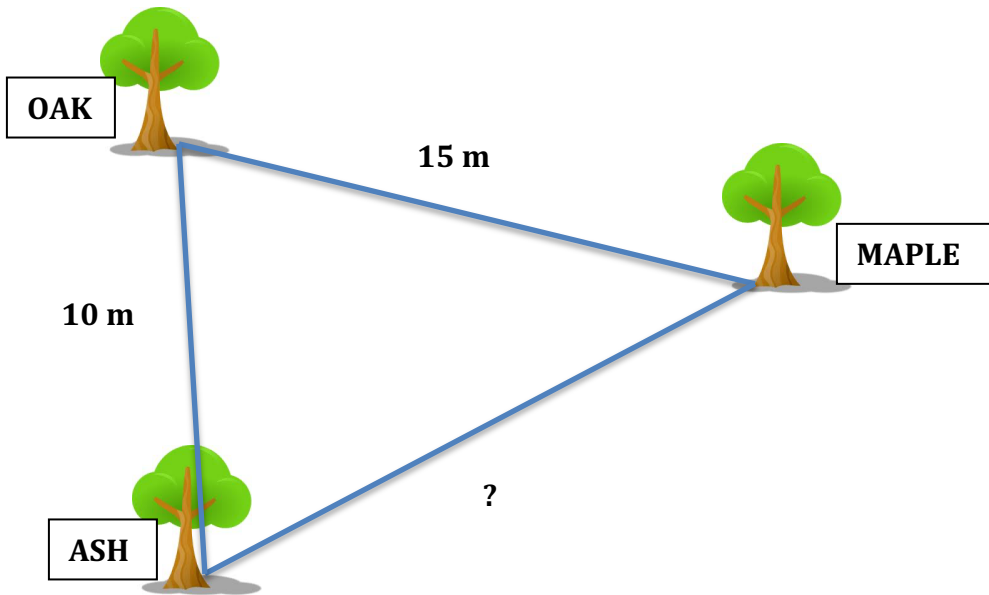
$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_

$\angle Z =$  \_\_\_\_\_



9) Three trees are in the yard at the back of Aly's house. The oak tree is 10 m from the ash tree and 15 m from the maple tree. The line from the oak tree to the ash tree and the line from the oak tree to the maple tree form an angle of  $78^\circ$ .



How far apart are the ash tree and the maple tree? Round your answer to the nearest tenth of a meter.

**Answers:**

1. a) 0.28, 0.96, 0.29 b) 0.6, 0.8, 0.75
2. a) 19.6 b) 15.7 c) 19.7 d) 8.0
3. a) 39.3 b) 24.5 c) 42.8 d) 62.4
4. a) 57.5 b) 68 c) 54.7 d) 70.8
5.  $b=28.5$ ,  $a=14.5$ ,  $B=63$
6. 1.3 meters
7. a) 11.4 b) 23 c) 43.9 d) 55.7 e) 66.4 f) 57.1 g) 7.1 h) 8.2
8.  $x=25.1$ ,  $y=23$ ,  $Z=71$
9. 16.2 meters