

Unit 3 Review Package Trigonometry

Includes Chapters 7 and 8 from the textbook

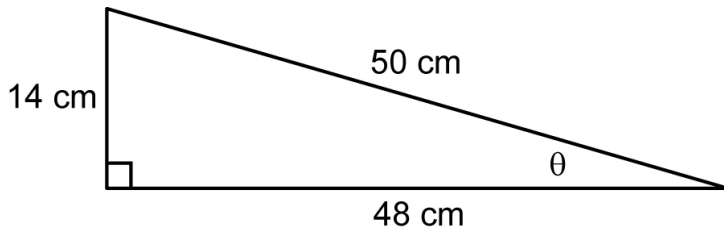
What you need to know:

Text book section	Topic	Completed
7.3 & 7.4	Find trig ratios	
7.3 & 7.4	Use trig to find side lengths	
7.3 & 7.4	Use trig to find angles	
7.5	Solve problems involving right triangles	
8.1	Sine Law	
8.2	Cosine Law (sides)	
8.3	Cosine Law (angles)	
8.4	Solve Problems Involving Acute Triangles	

Section 1: Right Triangles

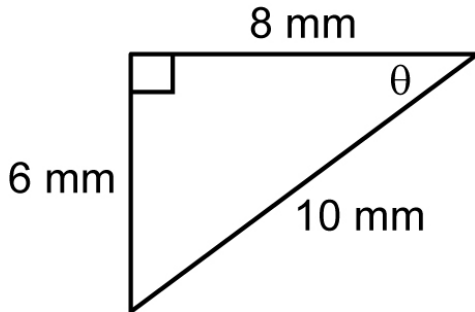
1. Find $\sin \theta$, $\cos \theta$, and $\tan \theta$ for each triangle, expressed as a decimal rounded to the nearest hundredth. (don't solve for the angle, just the side ratio)

a)



$\sin \theta$: _____
 $\cos \theta$: _____
 $\tan \theta$: _____

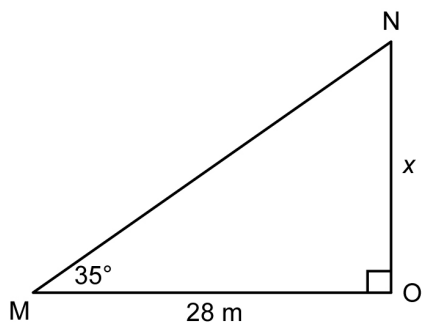
b)



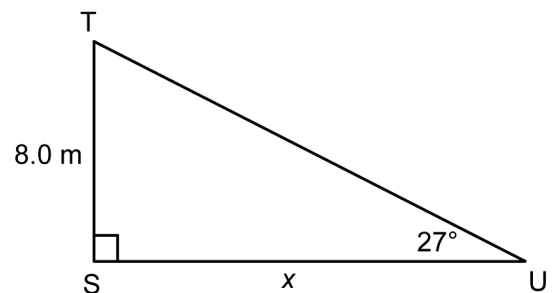
$\sin \theta$: _____
 $\cos \theta$: _____
 $\tan \theta$: _____

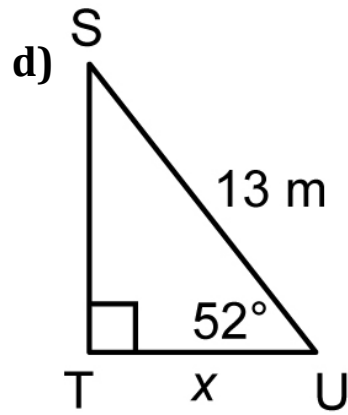
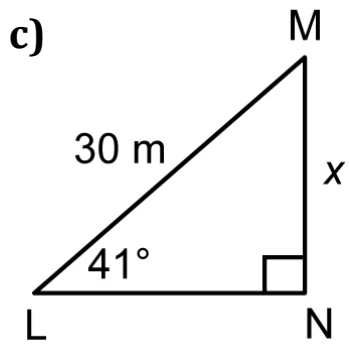
2. Find the length of 'x' to the nearest tenth.

a)



b)





3. Use inverse trig ratios to find the measure of each angle, to the nearest tenth of a degree.

a) $\tan \theta = 0.8173$

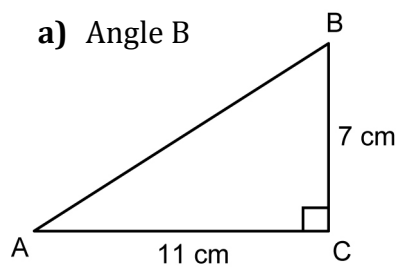
b) $\sin \theta = 0.4152$

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

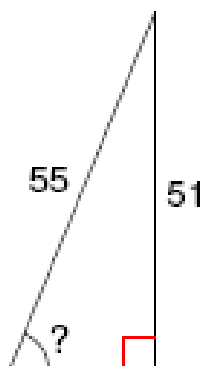
d) $\tan B = \frac{23}{12}$

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

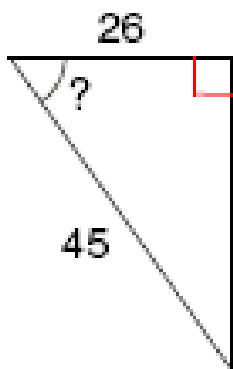
a) Angle B



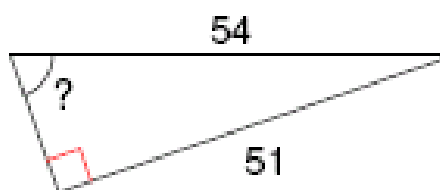
b)



c)

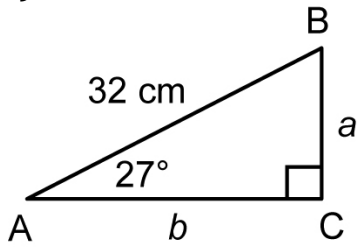


d)



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

a)



$b =$ _____

$a =$ _____

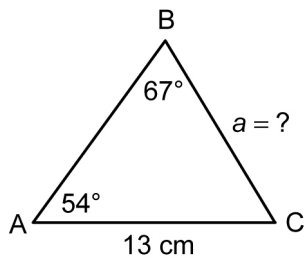
$\angle B =$ _____

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

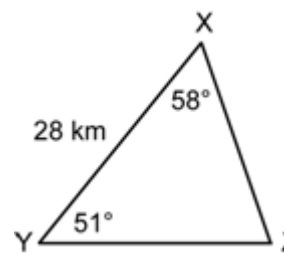
Section 2: Acute Triangles

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

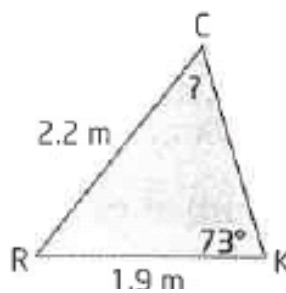
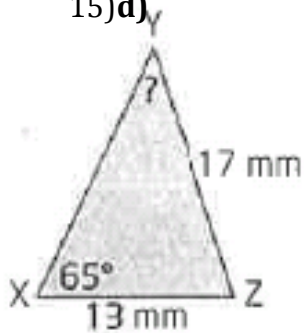
a) Side 'a'



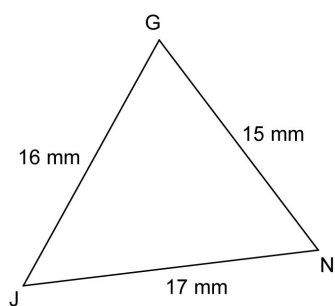
b) side 'y'



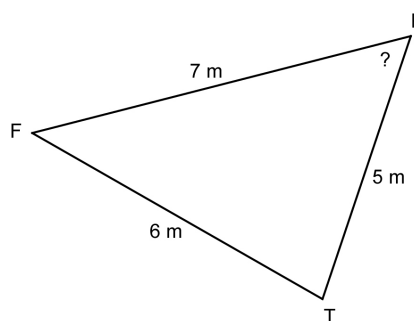
15)d)



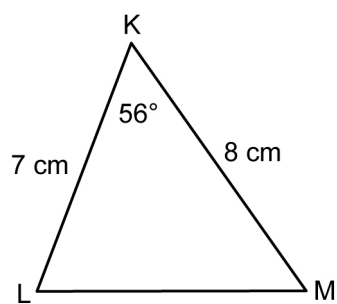
e) Solve for $\angle G$



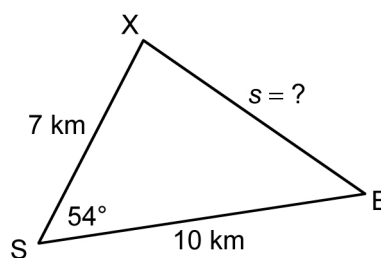
f) Solve for $\angle P$



g) Length of side 'k'

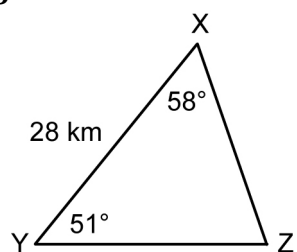


h) Length of side 's'



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

a)



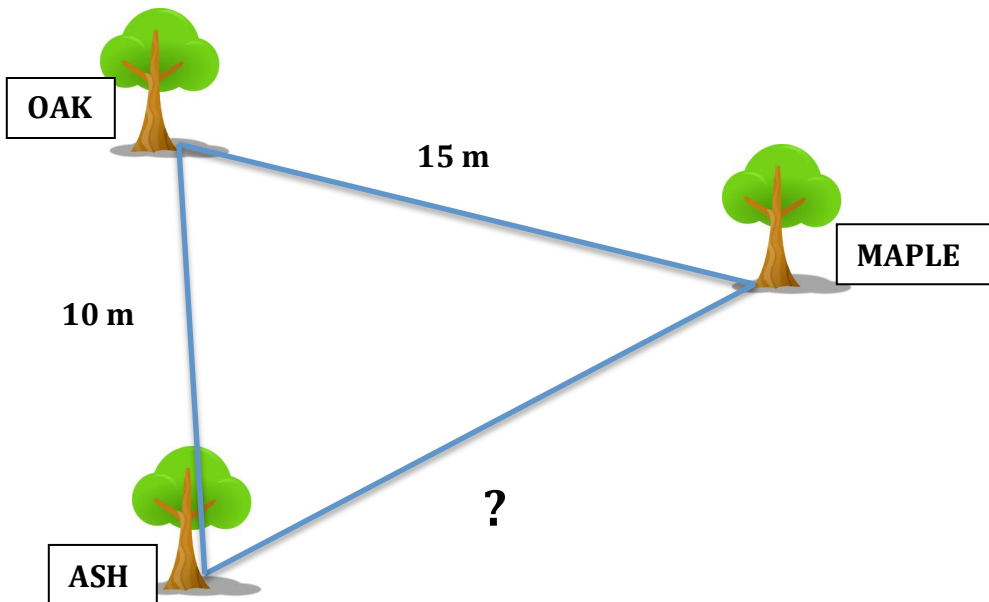
$x =$ _____

$y =$ _____

$\angle Z =$ _____

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° .



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