

Chapter 9- Lesson 3

Trigonometric Ratios- Solving for Angles

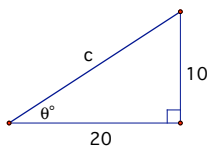
Goals

Use trigonometric ratios to solve for the angles in a right triangle.

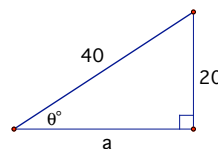
In the previous lesson you learned some “magic” about right triangles and how to find the measure of the reference angle of a right triangle when the triangle was in standard position. In this lesson you will work on improving those skills.

1. Solve the following right triangles. Justify with clear and complete work.

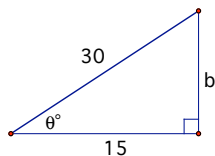
a.



b.

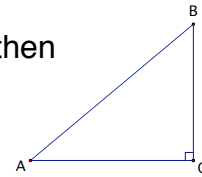


c.



Geometry: Chapter 9- Lesson 3— Trigonometric Ratios, Solving for Angles

In the space below (and on extra paper if needed), sketch and then solve each of these triangles. Justify with clear and complete work. Then use your work to complete the table below.



	AB (Hypotenuse)	BC (Opposite)	AC (Adjacent)	Ratio Used	Ratio's Value	$m\angle A^\circ$	$m\angle B^\circ$
1	7	5		$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
2	7	2		$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
3	8.5		2.7	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
4	9.8		5.4	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
5		7	6.8	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
6		6.8	7	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
7	10	3		$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
8	10		3	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			
9		3	4	$\frac{O}{H} - \frac{A}{H} - \frac{O}{A}$			