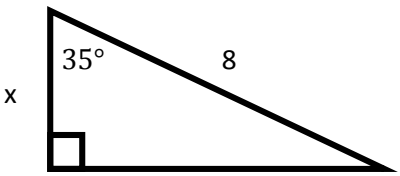
Algebra 2 Lesson 12.1-12.5 Quiz PreTake ____ **Name:_____Per#____**

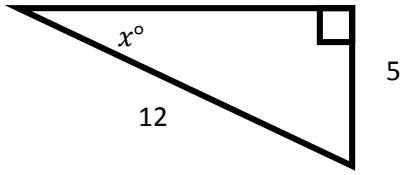
74

1. (2 pts each) Use a trigonometric function to find the value of x. Round to the nearest tenth.

a.

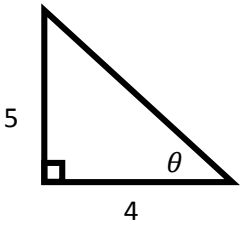


b.



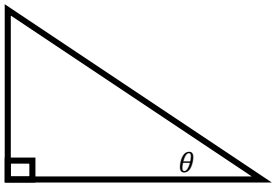
2. (6 pts each) Find the values of the six trigonometric functions for the angle θ.

a.



$\sin\theta =$		$\csc\theta =$	
$\cos\theta =$		$\sec\theta =$	
$\tan\theta =$		$\cot\theta =$	

b. $\sin\theta = \frac{8}{17}$



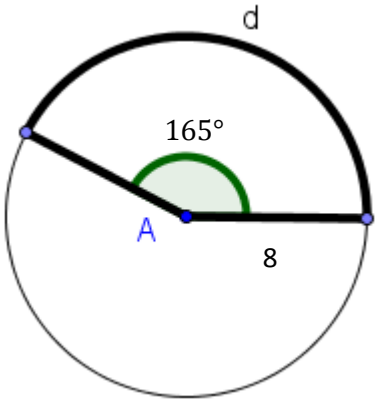
$\sin\theta =$		$\csc\theta =$	
$\cos\theta =$		$\sec\theta =$	
$\tan\theta =$		$\cot\theta =$	

3. (2 pts each) Convert radians to degrees or degrees to radians

a. $195°$

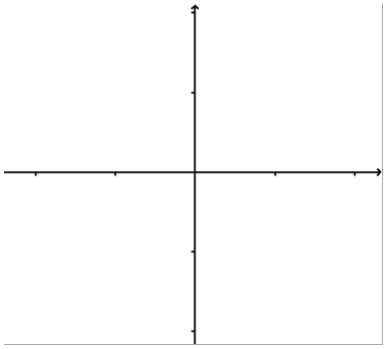
b. $\frac{5\pi}{9}$

4. (4 pts) Find the length of the arc *d*. Round to the nearest tenth

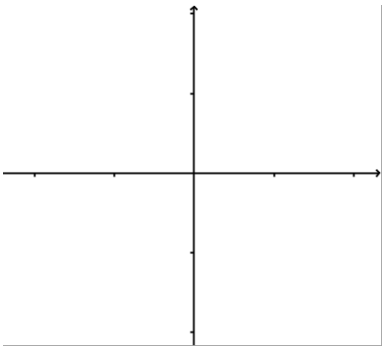


5. (4 pts each) Sketch each reference angle. Then mark and find its reference angle.

a. $480°$

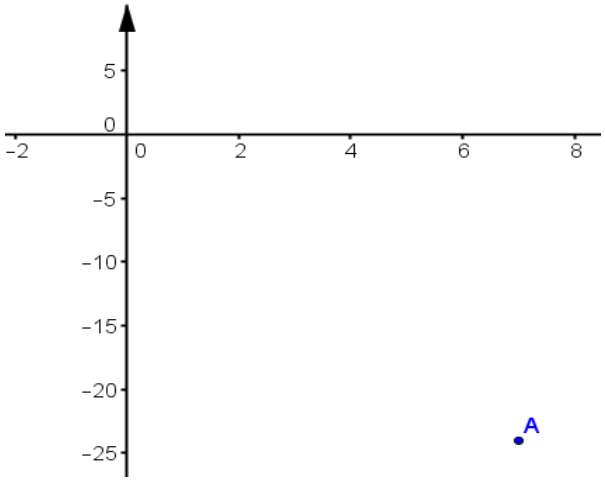


b. $-\frac{10\pi}{3}$



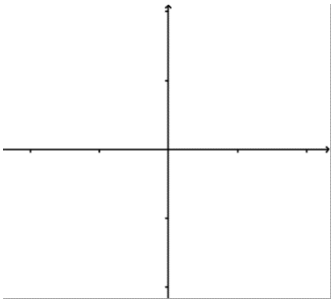
6. (6 pts) The terminal side of θ in standard position contains the given point$(7, -24)$. Find the EXACT values of the six trigonometric functions.

$\sin\theta =$		$\csc\theta =$	
$\cos\theta =$		$\sec\theta =$	
$\tan\theta =$		$\cot\theta =$	

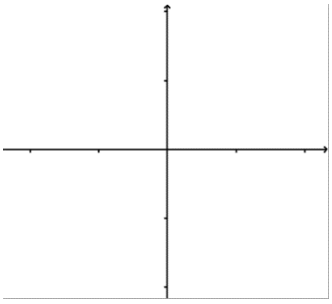


7. (4 pts each) Sketch the indicated angle, draw the reference angle and triangle, then find the EXACT value of each trigonometric function.

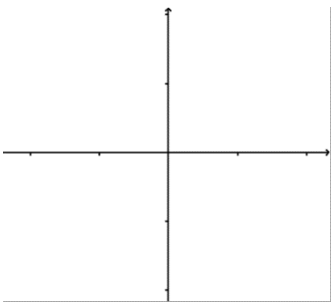
a. $\sin\frac{3\pi}{4}$



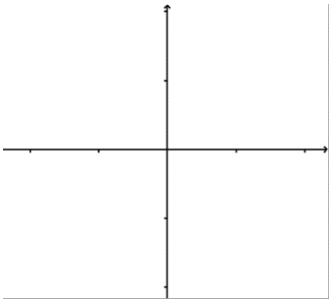
c. $\tan\frac{4\pi}{3}$



b. $\cos\frac{7\pi}{6}$



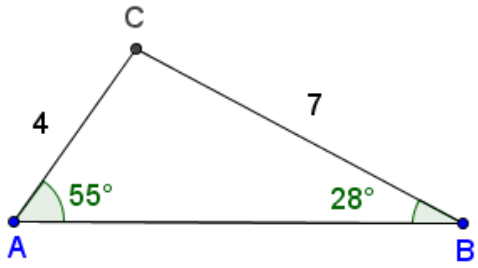
d. $\sec\frac{\pi}{2}$



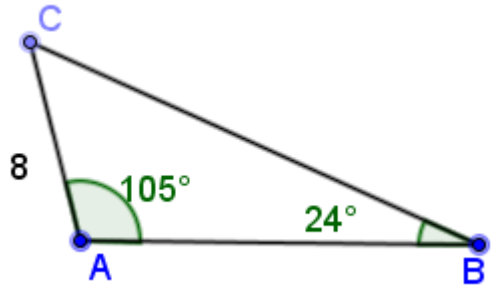
Algebra 2 Lesson 12.1-12.5 Quiz PreTake ____ **Name:_____Per#____**

74

8. (2pts) Find the area of the triangle to the nearest tenth.



9. (4 pts)Solve the triangle. Round each side length to the nearest tenth



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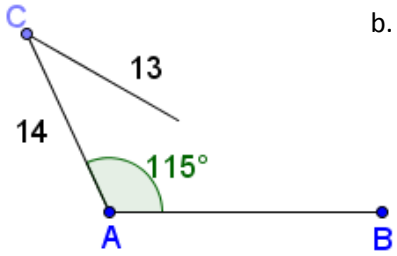
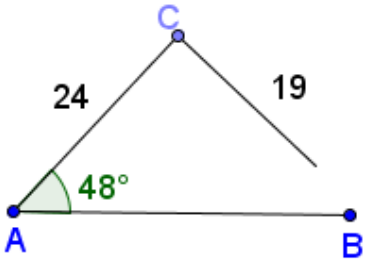
10. (2 pts each)Determine whether each ΔABC has no solution, one solution, or two solutions.

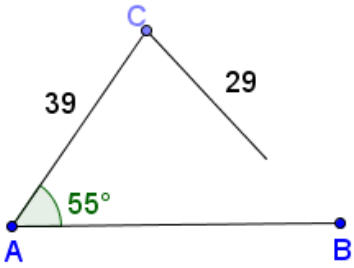
a.



b.

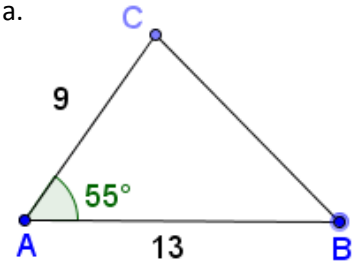


c.



11. (4 pts each)Solve the triangle. Round each side length to the nearest tenth and each angle to the nearest degree.

a.



b.