If each angle is in standard position, determine a **coterminal angle** that is between 0° and 360°. State the **quadrant** in which the terminal side lies.

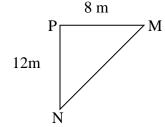
NAME:

1. 1146° 2. 1072° 3. -832°

4. Find the measure of the **reference angle** for 592°. Show work

HONORS TRIG CH.6 REVIEW#1

5. Find the *exact* values of the six trigonometric functions for M. Show work.



- 6. Evaluate csc (cot $^{-1}$ 4/3). Find the <u>exact</u> value by sketching a triangle in Quadrant I.
- 7. If sec $\theta = 7/5$, find sin θ . Find the <u>exact</u> value by sketching a triangle in Quadrant I.

Find the <u>exact</u> value by drawing a diagram for each angle. Show where the terminal side lands, label coordinates or use special triangle ratios by drawing a height to the x-axis and labeling x, y, r.

8. $\tan 60^{\circ}$ 9. $\sec 270^{\circ}$ 10. $\sin (-405^{\circ})$

#1-13 CHECK <u>ANSWERS</u>				
und	defin lefine lefine	ed	I III IV	
-1	-1	0	0	
52 6	6 2	248	352	
$\frac{1}{3}$	$\frac{2}{3}$	-	$\frac{3}{2}$	
$\frac{5}{3}$	$\frac{5}{13}$		1 <u>3</u> 5	
$\sqrt{3}$ $\frac{3\sqrt{13}}{13}$	$\frac{2\sqrt{6}}{7}$		$\frac{2\sqrt{13}}{13}$	
$\frac{3\sqrt{13}}{13}$	∕	$\frac{13}{2}$	$\frac{\sqrt{13}}{3}$	
$-\frac{\sqrt{2}}{2}$ $-\frac{\sqrt{10}}{10}$				
$-\frac{\sqrt{10}}{3}$ $-\sqrt{10}$				
$-\frac{3\sqrt{3}}{10}$	$\frac{10}{0}$	$-\frac{5}{12}$	2	
$-\frac{12}{5}$		2	$-\frac{13}{12}$	

Find the <u>exact</u> values of the six trig functions for each angle θ in standard position if a point with the given coordinates lies on its terminal side. Draw a diagram and show work using x, y, and r.

11. (5, -12) 12. (-2, 0)

13. Suppose θ is an angle in standard position whose terminal side lies in the given quadrant. Find the *exact* values of the remaining five trig functions for *tan* θ = 3; *Quadrant III.* Draw a diagram & show work.

OK to use calculator for #14-23. Sketch diagrams, show work, round to the nearest tenth.

Use a right triangle for #14-16 where $\angle C = 90^{\circ} \rightarrow 14$. If $A = 38^{\circ}$ and a = 24, find b.

- 15. Solve the right triangle: B = 49°, a = 16 (reminder: "solve triangle" = find all sides/angles)
- 16. Solve the right triangle: $A = 64^{\circ}$, c = 28

- 17. Solve the triangle using Law of Cosines and/or Law of Sines. c = 8, C = 49°, B = 57° *Draw a diagram.*
- 18. Solve for b using the Law of Cosines. B = 19° , a = 51, c = 61

19. In a triangle, b = 7, a = 9, and c = 12. Solve for A. *Draw a diagram. Be sure to use proper order of operations.*

Find the area of each triangle for #20-21. Draw a diagram. HINT: $A = \frac{1}{2} (side1)(side2)(sin included angle)$ 20. $B = 22.6^{\circ}$, a = 18.4, c = 6.721. b = 24, $A = 56^{\circ}$, $B = 78^{\circ}$

22. A kite is fastened to the ground by a string that is 65 meters long. If the angle of elevation of the kite is 70°, how far is the kite above the ground? <i>Draw a diagram</i> .	#14-23 CHECK ANSWERS
	5.0 8.9 10.2
23. Hugo is taking a boat tour of a lake. The route he takes is shown below.	12.3 18.4 21.0
4.5 mi lighthouse	23.7 24.4 25.2
32°	26 28.5 30.7
dock 8.2 mi	41 48.2 61.1
marina	74 175.6

- a. How far is it from the lighthouse to the marina?
- b. What is the angle between the route from the dock to the marina and the route from the marina to the lighthouse?