#### Unit 1 Review

Your test will cover all material from unit 1 and will be done without a calculator. This review will has some practice problems from many of the topics you learned in the last few weeks. Solutions with work for this review will be online at mskmathrhs.weebly.com. To best prepare for your test, you should complete this review, look over your notes and homework from this unit, and look over your last quizzes. Focus on the section where you missed homework or quiz questions. Good luck on your test tomorrow!

# 1.1 Special Right triangles



### 1.2-1.3 Trig Review (no calculator)

5. The terminal side of an angle  $\theta$  passes through the point (-5, 12). Find the value of the six trig functions of  $\theta$ 

6. 
$$\sin \theta = -\frac{7}{8}$$
 and  $\sec \theta > 0$ . Find the value of  $\cot \theta$ .

Find an expression to solve for each of the following: 7. a = 3,  $m < B = 37^{\circ}$ . Solve for c



8. b = 12, c = 17. Solve for m < A

### 1.4-1.6 Degree and Radian Measurement

Find a coterminal angle for the given angle. Leave radian values in radians.

0 _227 <sup>0</sup>	$10 \ 470^{\circ}$	11 15 <sup>0</sup>	$12 \frac{\pi}{2}$	13 $\frac{33\pi}{3}$	$14 - \frac{14\pi}{14\pi}$	
7221	10. 470	11. 15	7	1312	14 5	

Sketch the ter	minal side of th	ne angle in the	correct quadrant and	determine the reference	e angle
15. 580°	16264°	17. 140°	18. $\frac{11\pi}{7}$	19. $\frac{31\pi}{12}$	20. $-\frac{13\pi}{5}$
Covert degree 21. 5°	values to radia 22120°	ans and radian 23. 225°	values to degrees 24. $\frac{5\pi}{3}$	25. $\frac{\pi}{20}$	26. $\frac{3\pi}{4}$

27. A ferris wheel with a diameter of 220 ft takes 40 seconds to make one revolution. Find the angular velocity in radians per second and the linear velocity in ft/sec.

28. The wheel of a train makes 30 revolutions per second. Find the angular velocity in rad/min. Find the linear velocity of a point on the inside rim of the wheel 5 cm from the center in cm/sec.

## 1.7-1.8 Exact values and the unit circle

Understand the basic principles of the unit circle: 29. Which coordinate on the unit circle corresponds to  $\sin \theta$ ? cos  $\theta$ ? tan  $\theta$ ?

30. If  $\sin \theta > 0$ , then  $\theta$  lies in quadrant(s)\_\_\_\_\_

31. If sec  $\theta$  < 0 and tan  $\theta$  > 0, then  $\theta$  lies in quadrant(s) \_\_\_\_\_

Find the exact value of the following:

	5				
21. cos -30º	22. cot -120°	23. sin 225°	24. sin $\frac{5\pi}{3}$	25. $\cot \frac{3\pi}{2}$	26. $\sec \frac{3\pi}{4}$
21. cos -30°	22. cot -120°	23. sin 225°	24. sin $\frac{3}{3}$	25. $\cot \frac{3\pi}{2}$	26. 9

27. 
$$4\cos\frac{5\pi}{3} + \sin^2\left(-\frac{5\pi}{4}\right)$$
 28.  $5\cos 4\pi + 2\sin\frac{\pi}{2}$  29.  $\cos^2 225^\circ - \sec^2 120 + \tan 180^\circ$ 

30. 
$$\frac{1}{2}\sin 330^\circ + \frac{3}{2}\cos 300^\circ$$
 31.  $2\sin\frac{4\pi}{3} + \sin\frac{7\pi}{6}$  32.  $2\csc\frac{3\pi}{2} + 3\sec(-\pi)$