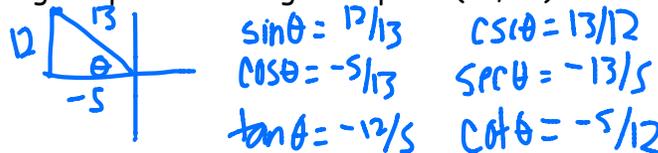


Unit 1 Review

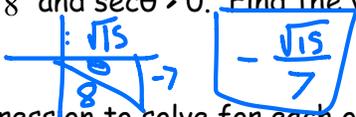
Your test will cover all material from unit 1 and will be done without a calculator. This review has some practice problems from many of the topics you learned in the last few weeks. It is not the same as your test, but will allow you to practice similar concepts. Solutions with work for this review will be online at coachbakerprecal.weebly.com. There are also additional practice problems on mymathlabforschool.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 online quiz and the optional online homework questions. Focus most on the sections where you missed homework or quiz questions. Good luck on your test tomorrow!

1.2-1.3 Trig Review (no calculator)

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



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



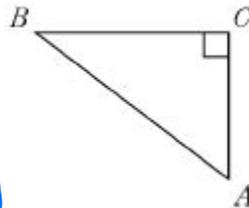
Find an expression to solve for each of the following (since it's no calculator, you don't need to actually solve it, just set it up):

3. $a = 3$, $m\angle B = 37^\circ$. Solve for c .

$$\cos 37 = \frac{3}{c} \rightarrow c = \frac{3}{\cos 37}$$

4. $b = 12$, $c = 17$. Solve for $m\angle A$

$$\cos A = \frac{12}{17} \quad A = \cos^{-1} \frac{12}{17}$$



1.4-1.6 Degree and Radian Measurement

Find a coterminal angle for the given angle. Leave radian values in radians. *You can add or subtract on any of these!*

5. -227° 6. 470° 7. 15° 8. $\frac{\pi}{7} + \frac{14\pi}{7} = \frac{15\pi}{7}$ 9. $\frac{33\pi}{12} - \frac{24\pi}{12} = \frac{9\pi}{12} = \frac{3\pi}{4}$ 10. $-\frac{14\pi}{5} + \frac{10\pi}{5} = -\frac{4\pi}{5}$
- $\frac{-227^\circ + 360}{133^\circ}$ $\frac{470^\circ - 360}{110^\circ}$ $\frac{15^\circ + 360}{375^\circ}$

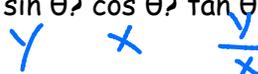
Sketch the terminal side of the angle in the correct quadrant and determine the reference angle

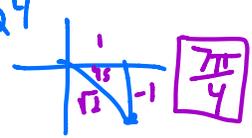
11. $580^\circ - 360 = 220^\circ$ 12. $-264^\circ + 360 = 96^\circ$ 13. 140° 14. $\frac{11\pi}{7}$ 15. $\frac{31\pi}{12} - \frac{24\pi}{12} = \frac{7\pi}{12}$ 16. $-\frac{13\pi}{5} + \frac{10\pi}{5} = -\frac{3\pi}{5}$
- $\frac{\pi}{36}$ 17. $\frac{\pi}{36}$ 18. $-\frac{2\pi}{3}$ 19. $\frac{5\pi}{4}$ 20. $\frac{5\pi}{3}$ 21. $\frac{\pi}{20}$ 22. $\frac{3\pi}{4}$
- $\frac{300}{300}$ $\frac{9}{9}$ $\frac{135^\circ}{135^\circ}$

1.7-1.9 Exact values and the unit circle

Understand the basic principles of the unit circle:

23. Which coordinate on the unit circle corresponds to $\sin \theta$? $\cos \theta$? $\tan \theta$?

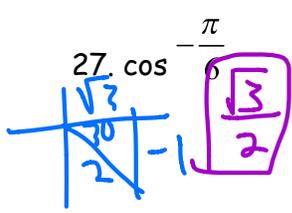


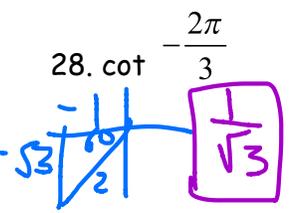
24. What radian value is associated with coordinates $(\frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}})$ Q4 

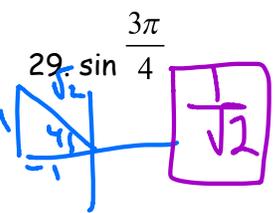
25. If $\sin \theta > 0$, then θ lies in quadrant(s) 1, 2

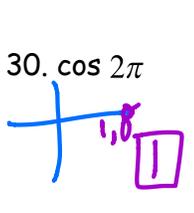
26. If $\sec \theta < 0$ and $\tan \theta > 0$, then θ lies in quadrant(s) 3

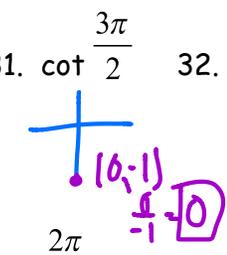
Find the exact value of the following:

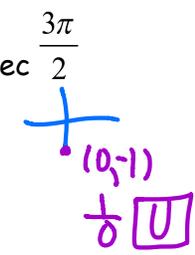
27. $\cos \frac{\pi}{6}$ 

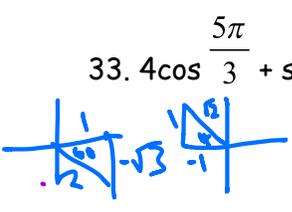
28. $\cot \frac{2\pi}{3}$ 

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

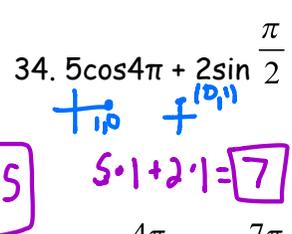
30. $\cos 2\pi$ 

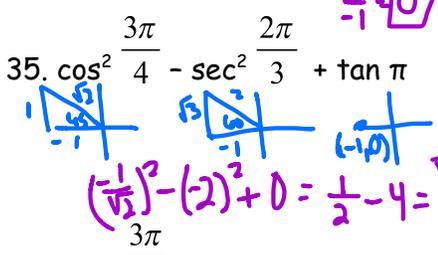
31. $\cot \frac{3\pi}{2}$ 

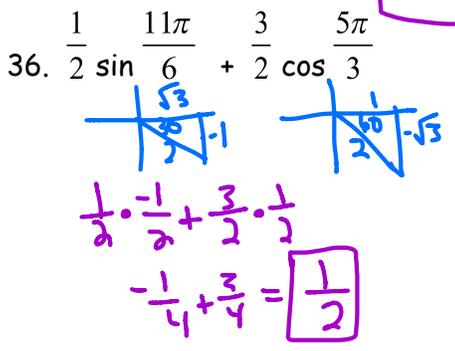
32. $\sec \frac{3\pi}{2}$ 

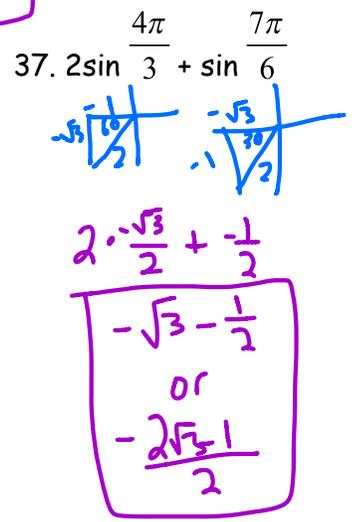
33. $4\cos \frac{5\pi}{3} + \sin^2 \left(-\frac{5\pi}{4} \right)$ 

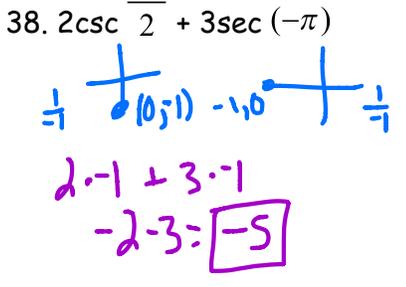
$4 \cdot \frac{1}{2} + \left(\frac{1}{\sqrt{2}} \right)^2$
 $2 + \frac{1}{2} = \frac{5}{2} = 2.5$

34. $5\cos 4\pi + 2\sin \frac{\pi}{2}$ 
 $5 \cdot 1 + 2 \cdot 1 = 7$

35. $\cos^2 \frac{3\pi}{4} - \sec^2 \frac{2\pi}{3} + \tan \pi$ 
 $\left(\frac{1}{\sqrt{2}} \right)^2 - (-2)^2 + 0 = \frac{1}{2} - 4 = -\frac{7}{2}$

36. $\frac{1}{2} \sin \frac{11\pi}{6} + \frac{3}{2} \cos \frac{5\pi}{3}$ 
 $\frac{1}{2} \cdot \left(-\frac{1}{2} \right) + \frac{3}{2} \cdot \frac{1}{2}$
 $-\frac{1}{4} + \frac{3}{4} = \frac{1}{2}$

37. $2\sin \frac{4\pi}{3} + \sin \frac{7\pi}{6}$ 
 $2 \cdot \left(-\frac{\sqrt{3}}{2} \right) + \left(-\frac{1}{2} \right)$
 $-\sqrt{3} - \frac{1}{2}$
 or
 $-\frac{2\sqrt{3} + 1}{2}$

38. $2\csc \frac{\pi}{2} + 3\sec(-\pi)$ 
 $2 \cdot 1 + 3 \cdot (-1)$
 $2 - 3 = -1$