

Week 22 Algebra 2 Assignment:

Day 1: Memorize the Unit Circle

Day 2: pp. 413-414 #1-14

Day 3: pp. 413-414 #15-23, 28-33

Day 4: pp. 420-422 #1-20

Day 5: pp. 420-422 #21-28, 33-38

Notes on Assignment:

Pages 413-414:

Work to show:

#1-6: Drawing and reference angle

#7-11, 13-14: Drawing and then show calculations for 3 trig values

#12: Answer as directed.

#15-23: State reference angle and then final answer.

#28-33: Show any work needed.

#1-6: Remember that the reference angle is the angle that is made with the x-axis, never the y-axis.

#7-11: Draw these first. You are going to have to use the Pythagorean Theorem to find the value of r . Then use the definitions on page 411 (or on the overheads) to find the trig values. Leave all answers in radical form and rationalize denominators when necessary.

#12: This is asking for all six trig values.

#13: Put a point on a ray that would give you 90° and find the trig values as you did for #11.

#14: Do this like #13: Put a point on a ray that would give you 270° and find the trig values.

#15-18: State the reference angles for these angles and then find their values using your calculator directly.

#19-23: Find the reference angle, find the trig value for the reference angle, then consider all six trig values and the quadrant your angle is in to decide the sign on your final answer.

#19: The reference angle for this angle is 45° . You know that $\cos 45^\circ = \frac{\sqrt{2}}{2}$. That means

our answer for $\cos 135^\circ$ is also $\frac{\sqrt{2}}{2}$, but the sign on the answer may be different.

Since 135° is in quadrant II, and allsintancos tells us that cosine is negative in quadrant II, the cosine of 135° must be negative. Our final answer would then be

$$\cos 135^\circ = -\frac{\sqrt{2}}{2}.$$

#28-33: These are all from chapter 8 if you need to look back.

Pages 420-422:

Work to show:

#1-6: Drawings

#7-20: Show the calculation and simplify.

#21-24: Answers only.

#25-26: Show work as needed.

#27-28: Drawing and answers.

#1-6: Show the rotation also.

#7-14: To change radians to degrees, multiply by $\frac{180}{\pi}$.

#8-20: To change degrees to radians, multiply by $\frac{\pi}{180}$.

#21-24: At this point, you should be getting familiar with the unit circle enough to know where these values are. If not, then change the radians to degrees and then figure them out.

#25: First change the radians to decimal degrees by multiplying by $\frac{180}{\pi}$. Round to 2 places. Then change the decimal part into minutes (remember how?). For the last part of this it wants you to write the radian measure in terms of π . In other words, how would you write 1.5927 as something times π ? (Hint: Try writing this as an equation $1.5927 = x\pi$ and solve for x . What you get for x is the "something" π .)

#26: Take out as many full circle revolutions from this angle until you get an angle that is in the first quadrant (less than $\pi/2$). Remember that each revolution is 2π .

#27-28: How are these related? Do you get the same values? Opposite values?

#34: Pull out the 2 from the first 2 terms and put in your + _____. Scoot the +3 over and also put in a - _____. Complete the square for the first blank, but when you go to fill in the -_____ remember that you actually multiplied that first blank number by 2.

#35: You need the answer to #34 to answer this problem.