Math 229: Homework Set 1

Name:_____

____/ 15

IMPORTANT! Use the pdf version of the textbook for the homework!

The "online" and pdf versions of the textbook are slightly different in presentation and the "online" version does not have the homework problems numbered. <u>*Be sure to use the pdf version for the homework.*</u>

Requirements: In order to receive credit on homework problems, you must

- Write down the original problem, within reason.
- Work out the problem, clearly showing your work.
- Check your answer in the back of the book. If your answer is incorrect, then you need to go back to find and fix the error.

Self-Assessment: Determine total number of <u>correctly done problems</u> (they don't have to be done correctly the first time...just make sure you find and fix any errors in your work!) and put that score in the last column.

If you give credit for a problem that hasn't been completed and/or corrected, you will lose 1 point on the overall grade (for example, if you put down 33/33 in Assignment 1 but have completed only 30 problems, your entire score on the homework <u>packet</u> will lose 3 points). <u>Please be honest and accurate in your assessment.</u>

Homework is due on the day of the exam. **Even answers are at the end of the assignment page.**

	Read this section:	Do these problems:	Completed/ Total
1	Supplement: DMS	Handout: $1 - 14$ all	/14
2	Section 7.1: Angles Study pages 576 - 590	 7.1 Exercises, page 591: Verbal(ize): 1, 2, 3, 5 Degrees and Radians: 27 – 39 odd Sketch angles: 7 – 21 odd Coterminal Angles (sketch angle, coterminal angle): 51, 55, 56 Arclength and Area (sketch!): 22, 23, 25, 25, 43, 45, 47, 49 Angular and Linear Speed: 61, 65, 67 	/33
3	Section 7.2: Right Triangle Trigonometry Study pages 593 – 600	 7.2 Exercises, page 601: Cofunctions: 7 – 9 all Basic Trig Definitions: 17 – 28 all Special Triangles: 11, 15, 16, 29, 31 Solving triangles (sides): SKETCH each triangle! 10, 12, 33, 35, 43, 45 (<i>Correct answer for #45 is 200.67answer in book is incorrect</i>) Angle of elevation/depression: 47, 51, 53 	/29
4	Section 7.3: Unit Circle Study pages 604 – 616	 7.3 Exercises, page 617: Quadrants and signs: 6 – 9 all Memory Test (do these from memory!): 11 – 21 odd Reference Angles: SKETCH each angle and ref. angle: 23 – 33 odd Using reference angles (NO calculator!): 35 – 53 odd, 91, 99 Circles with Radius R: 55, 57 Unit circle coordinates: 61 – 77 eoo, 79, 101 	/37

5	Section 7.4: The Other Trig Functions Study pages 620 - 630	 7.4 Exercises, page 631: Evaluate Trig Functions: 7 – 17 odd Evaluate using reference anglesSKETCH! 19 – 39 odd Even/Odd Functions: 43, 44, 45, 46, 47, 48 Unit Circle connection: 51 Calculator practice (use a Scientific Calculator): 55, 57, 59, 61 Identities: 70, 71 	/30
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Even Answers:

Section 7.1

#2: Explain why there are an infinite number of angles that are coterminal to a certain angle. Coterminal angles can be found by adding or subtracting any multiple of 360° or 2π . These additions and subtractions are infinite.

#22:
$$-\frac{\pi}{6}$$
 #56: $\frac{13\pi}{6}$

Section 7.2

#10:
$$\cos B = \frac{4}{5}$$
, $a = 10$ $b = 7.5$, $c = 12.5$
#12: $\tan A = \frac{5}{12}$, $b = 6$ $a = 2.5$, $c = 6.5$

#16:
$$c = 12, \measuredangle A = 45^{\circ}$$
 $a = 6\sqrt{2}, b = 6\sqrt{2}$

#18:	$\cos A = \frac{2}{\sqrt{29}}$ #20:	$\csc A = \frac{\sqrt{29}}{5}$	#22:	$\cot A = \frac{2}{5}$
#24:	$\cos A = \frac{4}{\sqrt{41}}$	#26: $\csc A = \frac{\sqrt{41}}{5}$		#28: $\cot A = \frac{4}{5}$

Section 7.3

#6: $\sin(t) < 0$ and $\cos(t) < 0$ in QIII

#8:
$$\sin(t) > 0$$
 and $\cos(t) < 0$ in QII

Section 7.4

#44: If $\cos t = \frac{1}{2}$, then $\cos(-t) = \frac{1}{2}$ #46: If $\csc t = 0.34$, then $\csc(-t) = -0.34$ #48: If $\cot t = 9.23$, then $\cot(-t) = -9.23$

#70:
$$\csc t \tan t = \frac{1}{\sin t} \cdot \frac{\sin t}{\cos t} = \frac{1}{\cos t} = \sec t$$