Pre-Calculus **Review Quiz #6** Name_____ Pd_____
Chapter: 5-1 to 5-3

-- NO CALCULATOR ON THE ENTIRE QUIZ --

Topic 1: Trig Basics

1. The legs of a right triangle are 6 and 8, find the hypotenuse.

2. The hypotenuse of a right triangle is 12 and one leg is 7, find the other leg.

3. State the 6 trigonometric ratios:

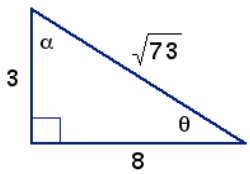
   Sin Θ = cos Θ = tan Θ =

   Cot Θ = sec Θ = csc Θ =

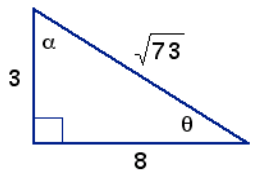
4. Write 700º as an angle between 0 and 360

5. state all 4 angles between 0 and 360 that have a reference angle of 60º

Topic 2: Stating the Trig Ratios



6. sin Θ =
7. cos Θ =
8. tan Θ =



9. cos ∝ =
10. csc ∝ =
11. cot ∝ =

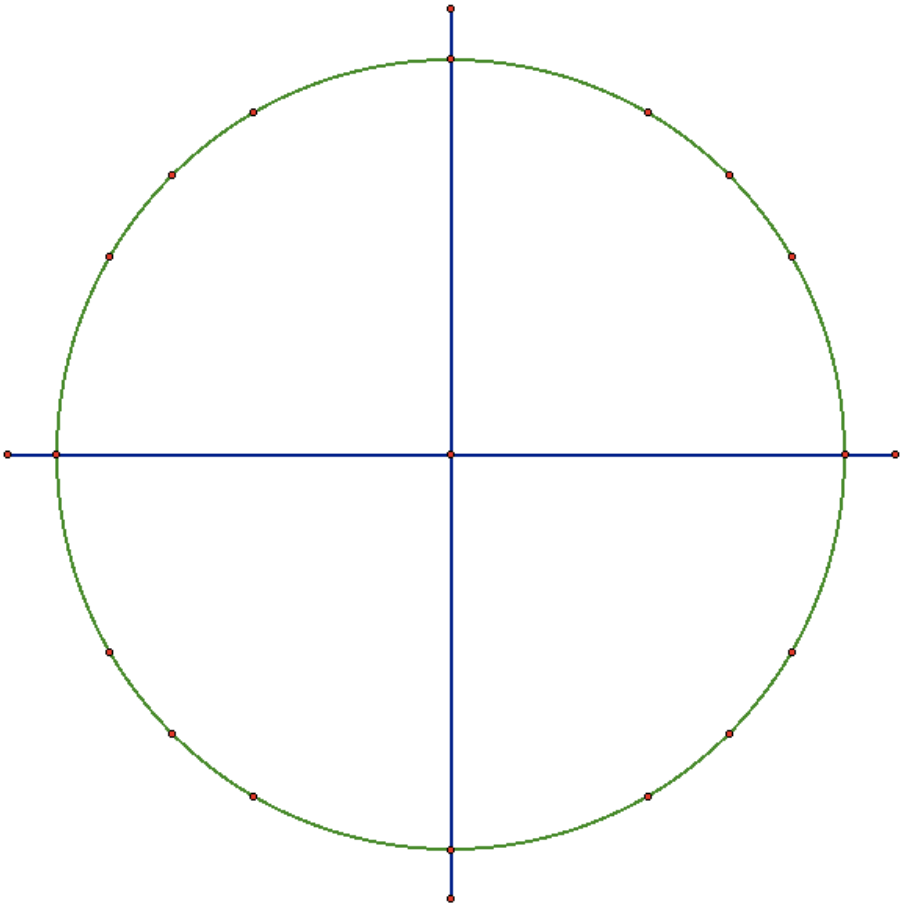
Topic 3: Special Right Triangles

12. Draw a 45-45-90 triangle with a shortest side of 5

13. Draw a 30-60-90 triangle with a longest side of 12

14. Draw a diagram on an xy plane of the four reference angles of the 30-60-90 triangle with hypotenuse 1.

Topic 4: The unit Circle – state the angle measure and ordered pairs in the unit circle for the 16 dots.



Topic 5: Using the Unit Circle

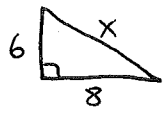
15. sin 45º =
16. cos 150º =
17. tan 120º =
18. csc 210º =
19. sec 30º =
20. cot 315º =
21. cos 90º =
22. sin 270º =

Pre-Calculus **Review Quiz #6** Name Key Pd_____
Chapter: 5-1 to 5-3

-- NO CALCULATOR ON THE ENTIRE QUIZ --

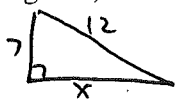
Topic 1: Trig Basics

1. The legs of a right triangle are 6 and 8, find the hypotenuse.



$6^2+8^2=x^2$
$36+64=x^2$
$100=x^2$
$10=x$

2. The hypotenuse of a right triangle is 12 and one leg is 7, find the other leg.



$7^2+x^2=12^2$
$49+x^2=144$
$x^2=95$
$x=\sqrt{95}$

3. State the 6 trigonometric ratios:

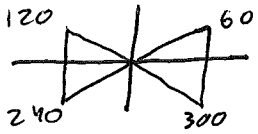
$\sin\Theta = \frac{O}{H}$ $\cos\Theta = \frac{A}{H}$ $\tan\Theta = \frac{O}{A}$

$\cot\Theta = \frac{H}{O}$ $\sec\Theta = \frac{H}{A}$ $\csc\Theta = \frac{A}{O}$

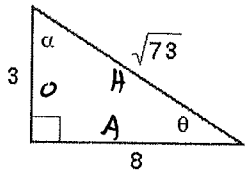
4. Write 700° as an angle between 0 and 360

$700-360=340°$

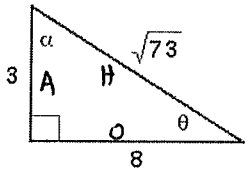
5. state all 4 angles between 0 and 360 that have a reference angle of 60°



Topic 2: Stating the Trig Ratios



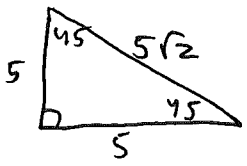
6. $\sin\Theta = \frac{O}{H} = \frac{3}{\sqrt{73}} = \frac{3\sqrt{73}}{73}$
7. $\cos\Theta = \frac{A}{H} = \frac{8}{\sqrt{73}} = \frac{8\sqrt{73}}{73}$
8. $\tan\Theta = \frac{O}{A} = \frac{3}{8}$



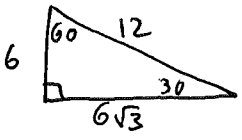
9. $\cos\alpha = \frac{A}{H} = \frac{3}{\sqrt{73}} = \frac{3\sqrt{73}}{73}$
10. $\csc\alpha = \frac{H}{O} = \frac{\sqrt{73}}{8}$
11. $\cot\alpha = \frac{A}{O} = \frac{3}{8}$

Topic 3: Special Right Triangles

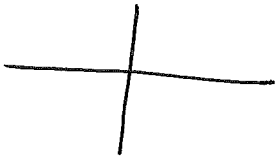
12. Draw a 45-45-90 triangle with a shortest side of 5



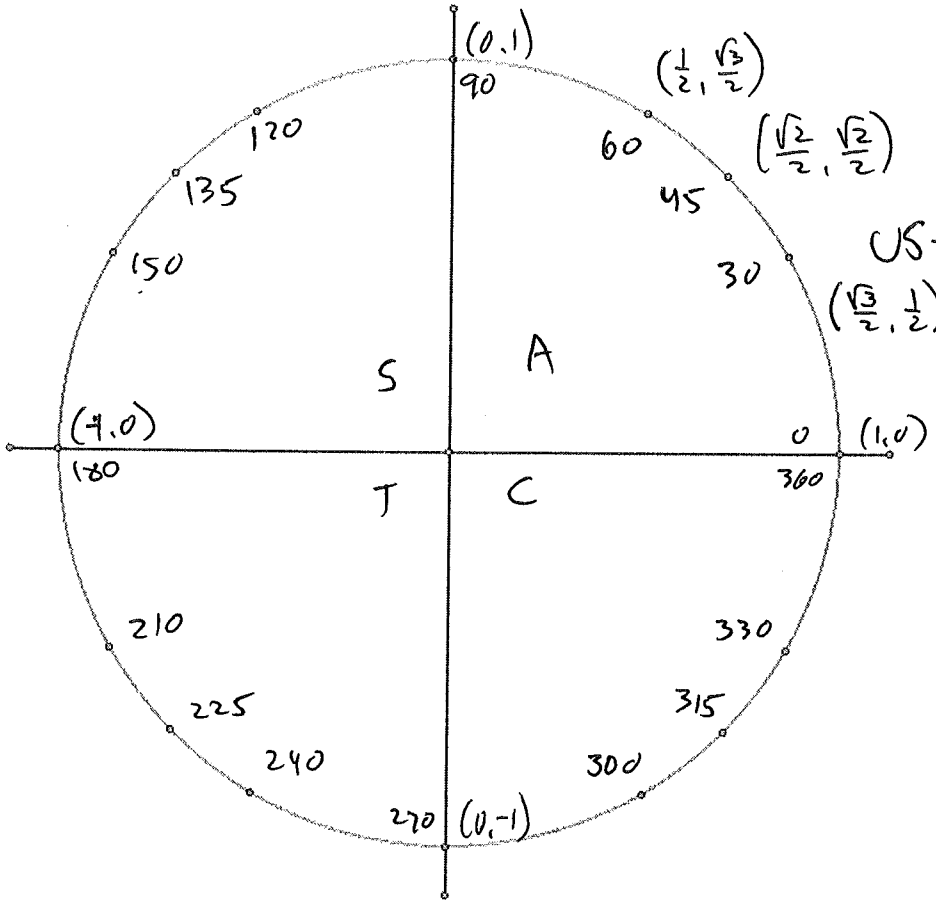
13. Draw a 30-60-90 triangle with a longest side of 12



~~14. Draw a diagram on an xy plane of the four reference angles of the 30-60-90 triangle with hypotenuse 1.~~



Topic 4: The unit Circle – state the angle measure and ordered pairs in the unit circle for the 16 dots.



use your ref. sheet to check

Topic 5: Using the Unit Circle

	Ref. Angle	How to get it?	Ratio	Sign	Ans.
15. sin 45° =	sin 45	Y at 45	$\frac{\sqrt{2}}{2}$	Q1 all +	$\frac{\sqrt{2}}{2}$
16. cos 150° =	cos 30	X at -30	$\frac{\sqrt{3}}{2}$	Q2 cos -	$-\frac{\sqrt{3}}{2}$
17. tan 120° =	tan 60	Y at 60 ÷ X at 60 (*1)	$\sqrt{3}$	Q2 tan -	$-\sqrt{3}$
18. csc 210° =	recip. of sin 30	Y at 30, then flip	2	Q3 csc -	-2
19. sec 30° =	recip of cos 30	X at 30, then flip	$\frac{2}{\sqrt{3}}$ (*2)	Q1 all +	$\frac{2\sqrt{3}}{3}$
20. cot 315° =	recip of tan 45	X at 45 ÷ Y at 45 (*3)	1	Q4 cot -	-1
21. cos 90° =		X at 90	0		0
22. sin 270° =		Y at 270	-1		-1

(*1) $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \frac{\sqrt{3}}{2} \cdot \frac{2}{1} = \sqrt{3}$

(*2) $\frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

(*3) $\frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$