

TRIGONOMETRY UNIT #1 - - REVIEW SHEET - - GRAPHING/SCIENTIFIC CALCULATORS!

I. If each angle has the given measure and is in standard position, determine the quadrant in which its terminal side lies.

1. $\frac{-3\pi}{4}$ 2. 620° 3. -135° 4. $\frac{7\pi}{4}$ 5. -330°

II. Change each degree measure to radian measure in terms of π .

6. 90° 7. 220° 8. 15°

III. Change each radian measure to degree measure.

9. $\frac{5\pi}{9}$ 10. $\frac{-\pi}{6}$ 11. $\frac{8\pi}{3}$

IV. Determine whether each pair of angles is coterminal. Write the word TRUE or the word FALSE.

- _____ 12. $180^\circ, 540^\circ$ _____ 13. $-108^\circ, -252^\circ$ _____ 14. $30^\circ, 330^\circ$
- _____ 15. $\frac{-5\pi}{3}, \frac{2\pi}{3}$ _____ 16. $\frac{\pi}{6}, \frac{17\pi}{6}$

V. Find the reference angle for each angle with the given measure. THE FINAL ANSWER MUST BE IN THE SAME UNIT!

17. 225° 18. 240° 19. 120° 20. $\frac{7\pi}{4}$ 21. 96°
22. $\frac{-5\pi}{6}$ 23. 348°

VI. Find the values of the six trigonometric functions of an angle in standard position if a point with the given coordinates lies on its terminal side.

	Ordered Pair	Quadrant	$\sin \theta$	$\cos \theta$	$\tan \theta$
24.	(3,-4)				
25.	(-8,15)				

	Quadrant	x	y	r	$\sin \theta$	$\cos \theta$	$\tan \theta$
26.	III					$-\frac{5}{13}$	
27.	IV						$-\frac{24}{7}$

VII. Find the area of each sector, given its central angle, θ , and the radius of the circle.

28. $\theta = \frac{\pi}{6}, r = 14$ cm 29. $\theta = \frac{\pi}{3}, r = 12$ cm

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VIII. Find the following to the nearest hundredth.

30. $\sin 65^\circ$

31. $\tan 75^\circ$

32. $\cos 67^\circ$

33. $\sin \frac{9\pi}{10}$

34. $\tan 335^\circ$

35. $\cos 26^\circ$

XIV. Use the graphing calculator to convert each measure to the nearest hundredth.

36. $43^\circ 38' 12''$

37. $169^\circ 45' 30''$

X. Find the exact value. (Do not use a graphing calculator for this part!!)

38. $\sin 420^\circ$

39. $\cos \frac{7\pi}{3}$

40. $\cos 120^\circ$

41. $\tan \frac{17\pi}{6}$

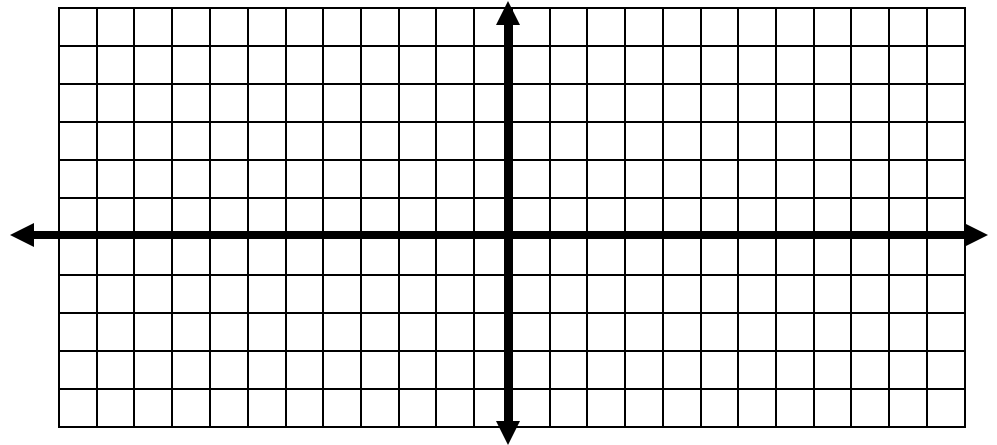
42. $\cos(-225^\circ)$

43. $\tan\left(-\frac{4\pi}{3}\right)$

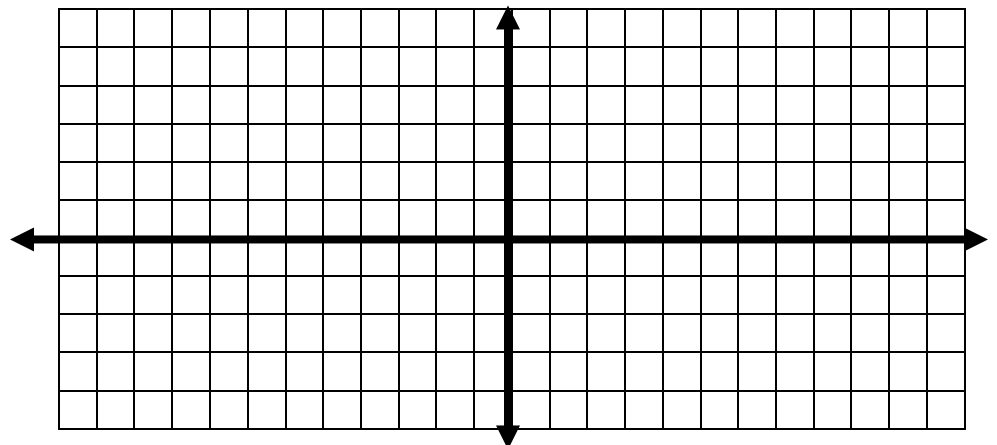
44. $\tan 225^\circ$

XI. Graph each one.

45. $y = 2 \sin 2\left(x + \frac{\pi}{2}\right) - 2$



46. $y = 2 \cos(3x + \pi) + 1$



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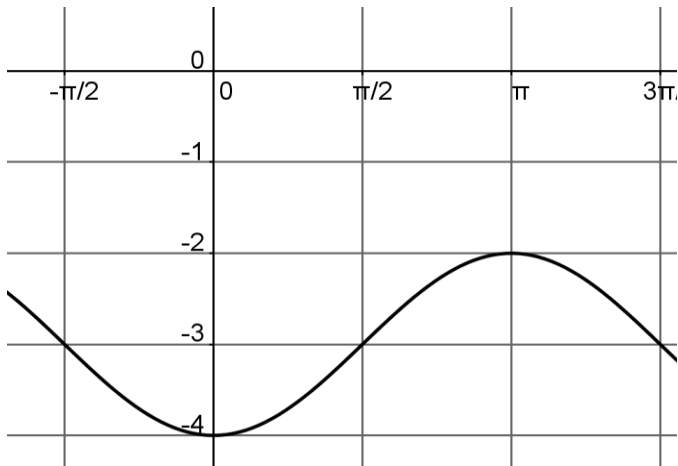
47. Write the equation of a sine function whose amplitude is 7, period is $\frac{3\pi}{2}$, phase shift: left 2π and vertical shift: down 8 units

48. Given $h(t) = -25\cos\left(\frac{2\pi}{15}t\right) + 40$.

_____ = max height _____ = min. height _____ = period

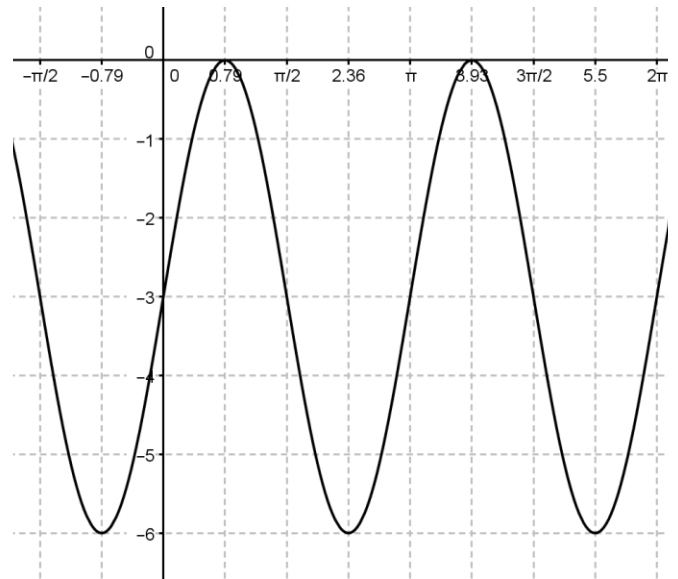
49. A Ferris wheel with a radius of 25 ft is rotating at a rate of 3 rev. per minute. A chair starts at the lowest point on the wheel, which is 5 ft above the ground. Write an equation for the height of the chair as a function of time (in seconds).

50. Write a cosine equation.



50. _____

51. Write a sine equation.



51. _____