

PRE-AP ALGEBRA 2

HOMEWORK #4A

Lesson 4A.1:

- 1) For each angle θ , find two coterminal angles in degrees (one positive and one negative). Also, draw each angle.

- a) $\theta = 755^\circ$
b) $\theta = -200^\circ$

- 2) Convert each angle to radians.

- a) 165°
b) -210°

- 3) Convert each angle to degrees.

- a) $\frac{15\pi}{12}$
b) $-\frac{13\pi}{6}$

- 4) For each angle θ , find two coterminal angles in radians (one positive and one negative).

- a) $\theta = \frac{67\pi}{16}$
b) $\theta = -\frac{24\pi}{11}$

Lesson 4A.4:

- 5) Find the coordinates (x, y) on the unit circle for the point at angle θ .

- a) $\theta = 585^\circ$
b) $\theta = -\frac{17\pi}{6}$

Lesson 4A.5:

- 6) Evaluate exactly.

- a) $\cos 315^\circ$
b) $\sin(-150^\circ)$
c) $\cos(-570^\circ)$
d) $\tan 330^\circ$

- 7) Evaluate exactly.

- a) $\sin\left(\frac{4\pi}{3}\right)$
b) $\cos\left(\frac{15\pi}{4}\right)$
c) $\sin\left(-\frac{7\pi}{6}\right)$
d) $\tan\left(\frac{2\pi}{3}\right)$

Lesson 4A.6:

- 8) For an angle θ in Quadrant IV, $\cos \theta = \frac{7}{25}$. Find $\sin \theta$ and $\tan \theta$.

- 9) For two points $(\frac{5}{8}, y)$ on the unit circle, find the two values of y . Also, for each point, state its quadrant.

- 10) Find exactly the coordinates of the point (x, y) which is on a circle of radius 10 at an angle of $\theta = \frac{5\pi}{3}$.

- 11) For an angle θ in Quadrant IV, $\tan \theta = -\frac{15}{8}$. Find $\sin \theta$ and $\cos \theta$.

Lesson 4A.8:

- 12) Calculate the period of each sine wave.

- a) $y = \sin(13x)$
b) $y = \sin\left(\frac{\pi x}{20}\right)$

13) Graph

$$y = 4 \sin \left[\frac{\pi}{4}(x - 2) \right] + 6$$

on the axes below. On the graph, label the period p , the amplitude a , the horizontal translation x_0 and the vertical translation y_0 .

