$\frac{-2\pi}{3} + \frac{6\pi}{3} = \frac{4\pi}{3}$ $\qquad \frac{-\frac{\sqrt{3}}{2}}{-\frac{1}{2}} =$

AFM Trig Review Name: KEY

Date:_____ Block:_____

Find the value of each trig function at the given angle.

1. $\sin\frac{\pi}{2}$ 1
2. $\tan-\frac{2\pi}{3}$ $\sqrt{3}$
3. $\cos\frac{13\pi}{6}$ $\sqrt{3}/2$
4. $\cos\frac{\pi}{4}$ $\sqrt{2}/2$
5) $\sin\frac{4\pi}{3}$ $-\frac{\sqrt{3}}{2}$
6) $\cos 690°$ $\frac{\sqrt{3}}{2}$
7) $\tan 2\pi$ 0
8) $\sin -240°$ $\frac{\sqrt{3}}{2}$

List the quadrant(s) where the following are positive and negative:

S | A
T | C

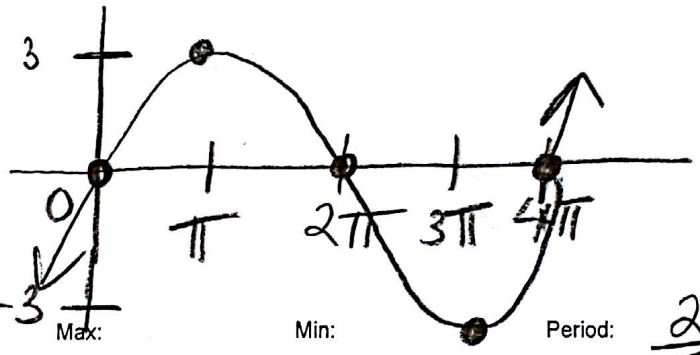
Trig Function	Quadrant where negative	Quadrant where positive
Sine	III, IV	I, II
Cosine	2, 3	1, 4
Tangent	2, 4	1, 3

Find the amplitude, max, min, period, x-values and ordered pairs of the following. Then graph the function.

9. $y = 3\sin\frac{1}{2}x$

Amplitude: 3 Max: $(\pi, 3)$ Min: $(3\pi, -3)$ Period: $\frac{2\pi}{\frac{1}{2}} = 4\pi$

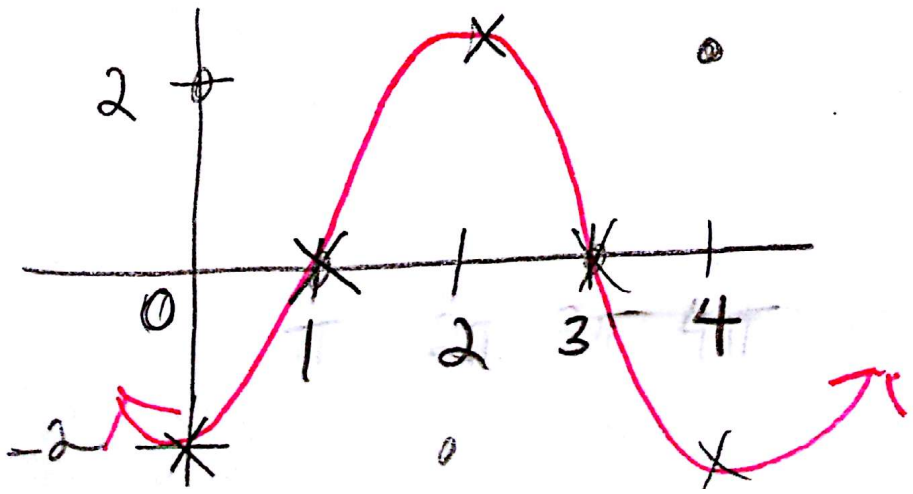
Graph:



10. $y = -2\cos\frac{\pi}{2}x$

Amplitude: 2 Max: Min: Period: $\frac{2\pi}{\frac{\pi}{2}} = 4$

Graph:



AFM Unit 4 Review KEY

1. I can sketch a positive or negative rotation and find co-terminal angles.

Determine the quadrant that each angle lies and find a positive and a negative coterminal angle.

a. $\theta = \frac{-5\pi}{6}$ b. $\theta = \frac{7\pi}{4}$ c. $\theta = 2.5$

d. $\theta = \frac{11\pi}{3}$ e. $\theta = \frac{-13\pi}{4}$ f. $\theta = 420^\circ$

2. I can convert between degrees/radians.

Convert the following angle measures from degrees to radians.

a. 153° 2.670 b. 521.5° 9.102 c. -71° -1.239

Convert the following angle measures from radians to degrees.

d. $\frac{5\pi}{7}$ 128.571° e. $\frac{12\pi}{5}$ 432° f. -5.5 -315.127°

3. I can define and evaluate the six trig functions in terms of x and y on the unit circle.

Evaluate the six trigonometric functions of the real number.

a. $t = \frac{2\pi}{3}$ b. $t = \frac{-3\pi}{4}$ c. $t = \frac{11\pi}{6}$

4. I can identify the "important" angles (degree and radian) and the (x, y) coordinate on the unit circle.

a. Draw a unit circle and complete the important points – degree, radian, and (x, y) points. ✓

b. Evaluate exactly $\cos\frac{\pi}{3} + \tan\frac{2\pi}{3} + \sin\frac{5\pi}{6}$. $1-\sqrt{3}$

5. I can evaluate trig functions at a given angle.

a. $\csc(120^\circ)$ $\frac{-2\sqrt{3}}{3}$ b. $\tan\left(\frac{5\pi}{6}\right)$ $-\frac{\sqrt{3}}{3}$ c. $\sec\left(\frac{7\pi}{3}\right)$ 2

6. I can find the reference angle of a rotation.

Find the reference angle of each of the following.

a. $\theta = 315^\circ$ 45° b. $\frac{19\pi}{4}$ $\frac{\pi}{4}$

(1) a) III, $\frac{7\pi}{6}$, $-\frac{17\pi}{6}$ b) IV, $\frac{15\pi}{4}$, $-\frac{\pi}{4}$

c) II, $2.5+2\pi$, $2.5-2\pi$ d) IV, $\frac{5\pi}{3}$, $-\frac{\pi}{3}$

e) II, $\frac{3\pi}{4}$, $-\frac{5\pi}{4}$ f) I, 60°, -300°