Algebra 2 Worksheet

Turn in at the end of the period

Draw the graph (Give the period and amplitude)

1) $y = 3 \sin(2x)$

2) $y = 4 \cos(x/2)$

3) $y = -2 \sin(\pi x/5)$

4) $y = -3 \cos(3x)$

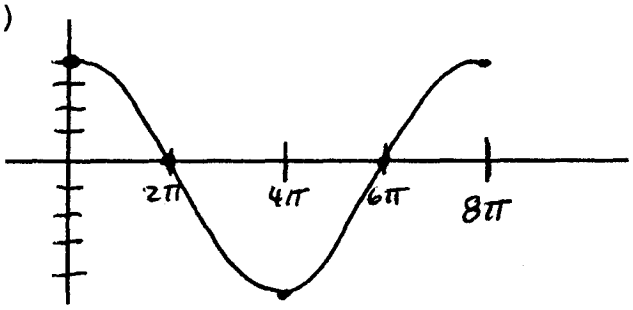
Draw the graph (using degrees)

5) $y = 5 \sin(10x)$

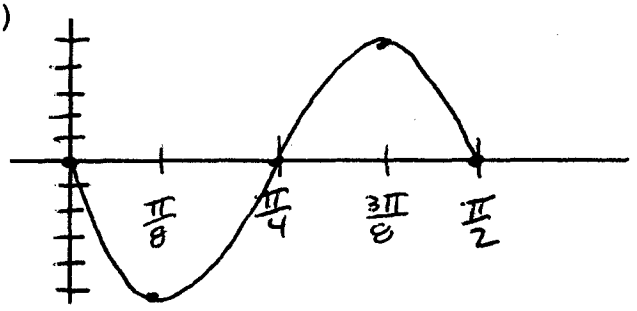
6) $y = -4 \cos(x/3)$

Write the equation of the given graph

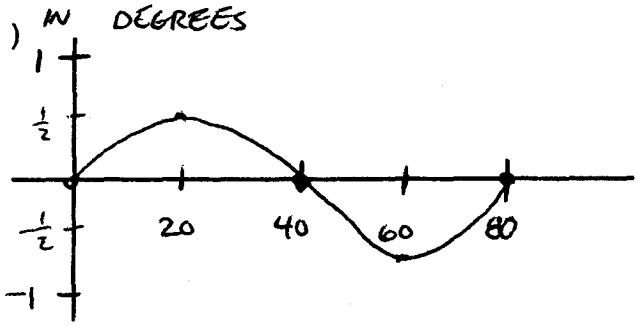
7)



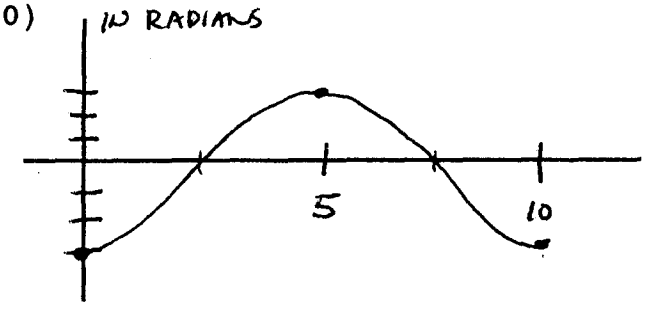
8)



9)



10)



① FIND THE SINE, COSINE, AND TANGENT FOR THE FOLLOWING ANGLES.

a) 315° b) $\frac{5\pi}{6}^R$ c) 240° d) $-\frac{\pi}{2}^R$ e) π

② GRAPH EACH OF THE FOLLOWING

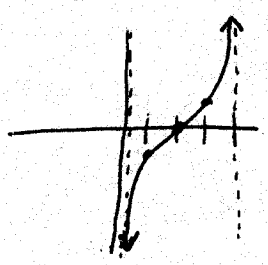
a) $y = 3\sin 2(x-20) + 2$ (DEGREES)

b) $y = -2\cos\frac{\pi}{3}(x+2) - 1$ (RADIANS)

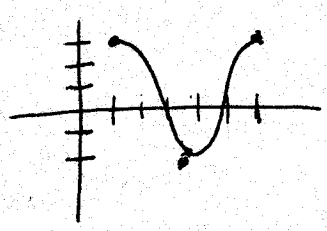
c) $y = \tan\frac{1}{3}(x+\frac{\pi}{2}) - 2$ (RADIANS)

③ WRITE THE EQUATION OF THE GRAPH

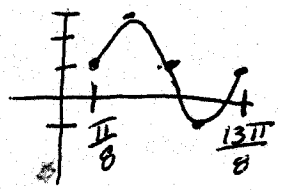
a)



b)



c)



④ SOLVE FOR X $(0 \le x < 360)$

a) $\sin x = \frac{1}{2}$ b) $\cos x = -\frac{\sqrt{2}}{2}$ c) $\tan x = -\sqrt{3}$

d) $\sin x = -.853$ e) $\cos x = -.25$ f) $\tan x = 2.3$

⑤ THE WARMEST TEMPERATURE OF THE DAY OCCURS AT 4:00 P.M. THE COOLEST TEMPERATURE OCCURS AT 4:00 A.M. WRITE A FORMULA THAT MODELS THE TEMPERATURE CHANGE. (IN RADIANS) START YOUR GRAPH AT 12:00 NOON.