Algebra 2 Hwk #29 Sec 13-7 Spring 2016 Name:

Describe any phase shift and vertical shift each equation represents.

1. $y = 4\text{Sin}(x + \pi) - 1$

2. $y = -9\text{Cos}(5(x - \frac{2\pi}{3})) + 6$

Write the equation of each using the description of the transfomations applied to each parent function.

3. Parent function: Cos$x$ Transformations: Upside-down, Period $= \frac{2\pi}{7}$, shift $\frac{\pi}{4}$ to the left & 10 units up.

EQ:

4. Parent function: Sin$x$ Transformations: Vertical stretch factor of 4, Period $= 6\pi$, shift $\frac{3\pi}{4}$ to the right and 9 units down.

EQ:

5. Find the period, amplitude, phase shift, and equation of the midline for this function:
$y = 11\text{Cos}(12(x - \frac{5\pi}{4}) + 13$

For 6 and 7, graph one period of each function. Label the coordinates of the maximums, minimums, and x-intercepts.

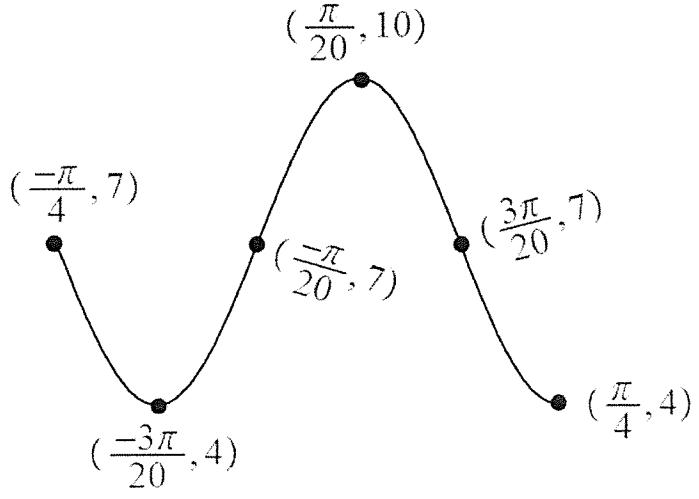
6. $y = -5\text{Sin}(2(x + \frac{\pi}{2})) + 8$

7. $y = 8\text{Cos}(3(x - \frac{\pi}{6})) - 5$

#'s 8 and 9 are on the back

For 8 and 9.Write both a Sin and Cos equation for the graph below.

8.



9.