

Name: _____
 Date: _____
 Class: _____

Algebra
 Unit 4
 HW 4-4

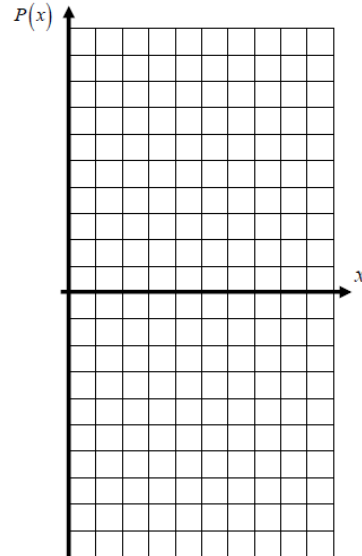
1) Graph the following function on the interval $1 \leq x \leq 6$: $f(x) = (x - 3)^2 - 6$

2) Graph $g(x) = 3x^2 + 2x - 4$.

3) Profits for the upcoming year for a shipping company have been quantified and put into the equation $P(x) = \frac{1}{2}(x-2)^2 - 8$ where x is the number of packages shipped in thousands and $P(x)$ is the corresponding profit in millions of dollars.

(a) Use your calculator to fill out the following table and graph the function on the grid for the interval $0 \leq x \leq 10$.

x	$P(x)$	(x, y)
0		
2		
4		
6		
8		
10		



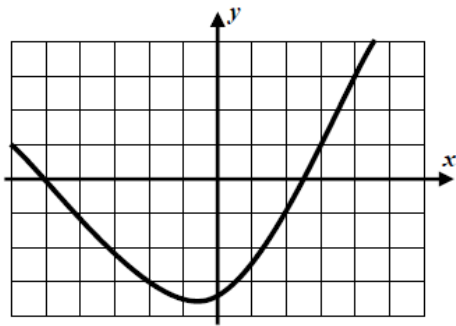
(b) Over what interval is $P(x) < 0$? What does this interval represent?

4) Is the point $(2, 6)$ on the graph of the function $n(x) = x^2 + 3x - 4$

5) If $f(x) = \frac{6x-10}{8-x}$ what would the value of $f(-4)$ be?

6) What would the minimum value of $y = (x-1)^2 - 4$ be?

7)



Is this function increasing or decreasing on the interval $-4 < x < -1$

8) Is the function in #7, is the function negative or positive for the interval $x > 3$