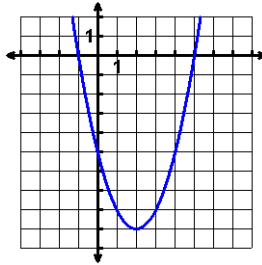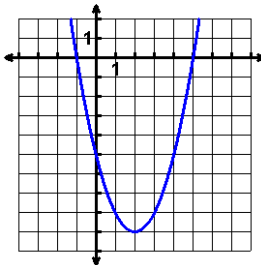**Name:** _____   **Date:** _____

1. $f(x) = 2x^2 - 3$ from [2, 4].	2. $f(x) = -x^2 - 7x + 1$ from [-1, 3].

3. a. Find the rate of change from day 2 to 5.

DAYS (X)	AMOUNT OF BACTERIA F(X)
1	19
2	30
3	48
4	76
5	121
6	192

4. In 2008, about 66 million U.S. households had both landline phones & cell phones. Find the rate of change from 2008 – 2011.

YEAR (X)	HOUSEHOLDS IN MILLIONS F(X)
2008	66
2009	61
2010	56
2011	51

What does this mean?

5. Find the average rate of change from [0, 2]

6. Find the average rate of change from [4, 5]

7. Find the rate of change of Pete's height from 3 to 5 years.

Time (years)	1	2	3	4	5	6
Height(in.)	27	35	37	42	45	49

8. For $f(x) = x^2 + 4x + 1$, find the rate of change on the interval [-2, 4].