

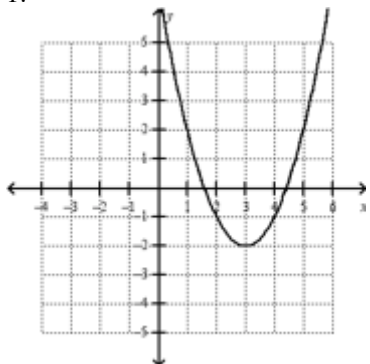
# Assignment 23

Name: \_\_\_\_\_

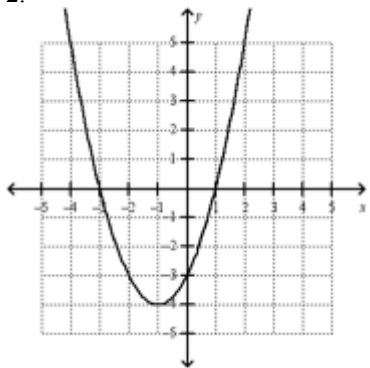
## Section 1 – Writing Quadratic Equations

Write the equation for each quadratic shown.

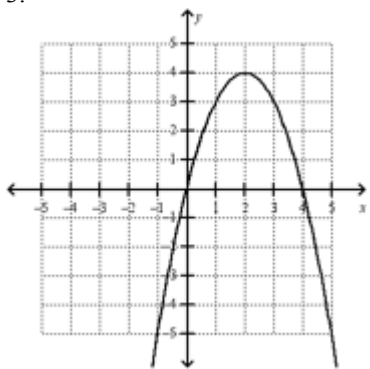
1.



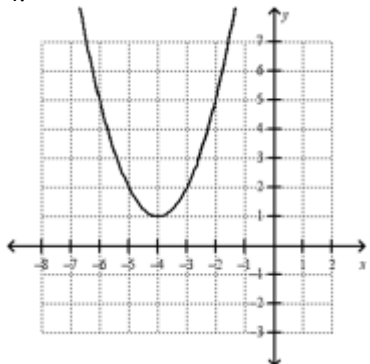
2.



3.



4.



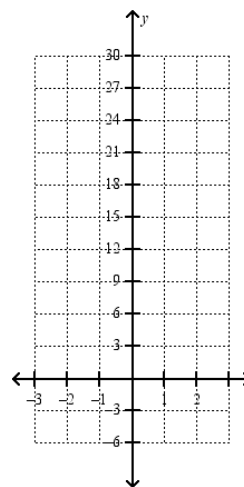
## Section 2 – Graphing Exponential Equations

Fill in each table and graph the function.

1.

$$y = 3^x$$

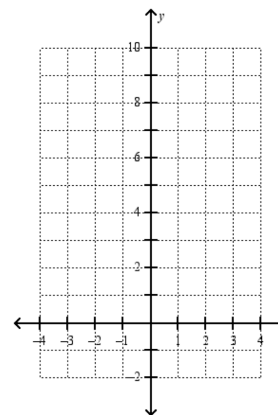
x	y
-1	
0	
1	
2	
3	



2.

$$y = \left(\frac{1}{2}\right)^x$$

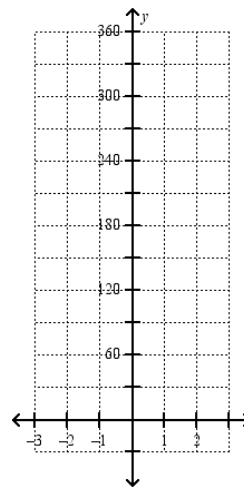
x	y
-3	
-2	
-1	
0	
1	



3.

$$y = 10(3)^x$$

x	y
-1	
0	
1	
2	
3	



### Section 3 – Half-Life Problems

1. If a jumbo plasma screen TV worth \$6000 loses half its value each year what is its value after 3 years?

2. A radioactive isotope has a half-life of 10 hours. Find the amount of the isotope left from a 400-mg sample after 40 hours.

3. An asthma medicine was a half-life of one hour. If a patient takes 300-mg at 12-noon how much is left in the patient 4pm?

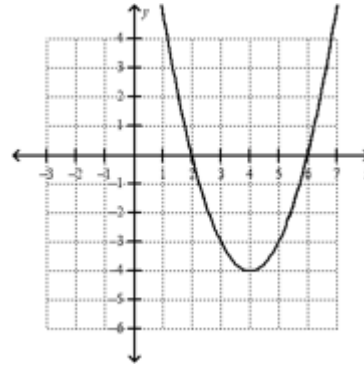
4. A car typically loses half its value each year. If you bought a car for \$12,000 what is its value after 5 years?

5. A car typically loses half its value each year. If you bought a car for \$20,000 how many years will it take for its value to dip below \$2000?

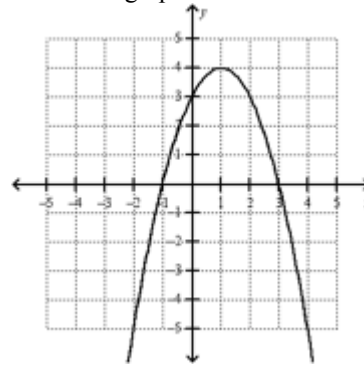
### Section 4 – “Final” Quadratics

1. Find the zeros of the function  $f(x) = x^2 + 23x + 60$  by factoring.

2. Solve the equation  $x^2 - 8x + 12 = 0$  by using the graph



3. Use the graph to find the zeros of the function (if any).



4. Find the axis of symmetry of the graph  $y = 3x^2 + 6x + 4$ .

5. Use the graph to find the zeros of the function (if any).

