

## Chapter 6 Practice Test

### Multiple Choice

1. According to this relation, the value of  $y$  when  $x = 6$  is:

$x$	$y$
0	4
1	5
2	8
3	13
4	20
5	29

A 40      B 37      C 34      D 20

2. According to this relation, the value of  $y$  when  $x = 1$  is:

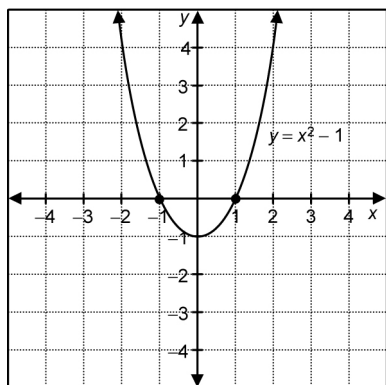
$x$	$y$
-4	32
-3	18
-2	8
-1	2
0	0

A -2      B 0      C 2      D 4

3. Which equation represents a quadratic relation?

A  $y = 4x^2$       B  $y = 4x$   
C  $y = 4x + 4$       D  $y = 4$

4. The  $x$ -intercepts for the graph are:



A no  $x$ -intercepts      B -1 and 1  
C -1      D 0

5. If the coordinates of the vertex are  $(0, 2)$ , which statement is NOT true?

A the equation of the axis of symmetry is  $x = 0$   
B the  $y$ -intercept is 2  
C the maximum/minimum value is 2  
D the  $x$ -intercept is 0

6. If the axis of symmetry is  $x = -2$ , which statement is true?

A the  $x$ -coordinate of the vertex is 0  
B the  $x$ -coordinate of the vertex is -2  
C the  $x$ -intercept is -2  
D the  $y$ -intercept must be -2

7. Marie left a voicemail message for two friends telling them where a party was being held. Each friend passed the voicemail message on to two other friends, and so on. If there are 65 people in the school, how many voicemail messages have to be left before everyone has the information?

A 2      B 4      C 6      D 8

### Short Response

8. Determine whether the relation is linear or quadratic.

$x$	$y$
-4	-4
-3	-2.25
-2	-1
-1	-0.25
0	0

9. Sketch a parabola with these features:

- i) the coordinates of the vertex is  $(0, 2)$
- ii) the equation of the axis of symmetry is  $x = 0$
- iii) the  $y$ -intercept is 2
- iv) the maximum/minimum value is 2
- v) the  $x$ -intercepts are 4 and -4

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

Date: \_\_\_\_\_

**BLM 6.PT.1**

(page 2)

10. Make a table of values for each relation, then determine whether the relation is quadratic.

a)  $y = x - 2$

b)  $y = x^2 + 3x + 1$

c)  $y = -x^2 + 100$

d)  $y = -2x^2$

**Extended Response**

11. Kelly is throwing a Frisbee with her dog. Her dog doesn't catch the Frisbee on the way up, but waits for it to come down before catching it. The table shows the height and horizontal distance of the Frisbee.

Horizontal Distance (m)	Height (m)
0	0
2	2
4	4
6	8
8	4
10	2
12	0

- a) Draw a scatter plot of the data.  
b) Using a graphing calculator, find the equation of the curve of best fit.

12. The shape of a wooden bridge built over a small creek can be modelled by the quadratic relation  $y = 16 - x^2$ .

- a) Complete the table of values.

$x$	$y$
-3	
-2	
-1	
0	
1	
2	
3	

- b) Graph the data.  
c) Identify the  $y$ -intercept, the  $x$ -intercepts, the coordinates of the vertex, and the equation of the axis of symmetry.