

## Chapter 9 Test

For #1 to #5, select the best answer.

1. Which word describes  $y = x + 2$ ?

**A** constant      **B** equation      **C** expression      **D** variable

2. The table shows the number of lug nuts in relation to the number of tires. Which equation represents the linear relation?

**A**  $n = t + 5$

**B**  $t = n + 5$

**C**  $n = 5t$

**D**  $t = 5n$

Tires ( $t$ )	Lug Nuts ( $n$ )
1	5
2	10
3	15
4	20

3. Which table of values represents the graph shown?

**A**

$x$	$y$
0	4
1	5
2	6
3	7
4	8

**B**

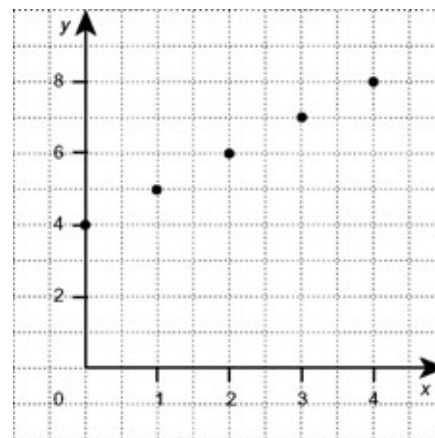
$x$	$y$
0	4
1	5
2	6
3	7
4	7

**C**

$x$	$y$
0	4
1	5
2	7
3	6
4	8

**D**

$x$	$y$
0	4
1	6
2	6
3	7
4	8



4. Which table of values represents the linear relation represented by the equation  $y = 2x - 3$ ?

**A**

$x$	$y$
0	3
1	5
2	1

**B**

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

**C**

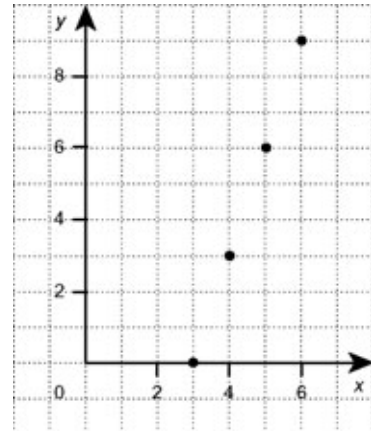
$x$	$y$
0	-2
1	-1
2	0

**D**

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

5. Which equation represents the graph shown?

- A**  $y = 3 - x$   
**B**  $y = x - 3$   
**C**  $y = 2x - 6$   
**D**  $y = 3x - 9$



### Short Answer

6. Copy and complete the following tables.

**a)**

$y = 4 - x$	
$x$	$y$
0	
1	
2	
3	
4	

**b)**

$y = x + 5$	
$x$	$y$
-3	
	4
0	
1	
	8

**c)**

$y = 2x$	
$x$	$y$
	0
	2
	4
	8
	16

**d)**

$x$	$y$
	-6
-1	
	0
1	
	6

7. **a)** Draw and label a graph of the equation  $y = 3x - 2$ , for  $x = 1, 2, 3,$  and  $4$ .  
**b)** Is it a linear relation? Use two ways to explain your answer.

### Extended Response

8. Tina began riding her all-terrain vehicle (ATV). After 5 s, her speed was 10 km/h. After 10 s, her speed was 25 km/h. After 15 s, her speed was 30 km/h. After 20 s, her speed was 35 km/h.
- a)** Make a table of values that represents Tina's ATV ride.  
**b)** Graph the table of values.  
**c)** Is there a linear relation between time and speed during Tina's ATV ride? Explain.  
**d)** What must happen for there to be a linear relation between time and speed?