

Directions: When working each of the following questions, be sure to show all work.

1) Identify the dependent quantity when x is 6

<i>Input (x)</i>	$3x + 6$	<i>Output (y)</i>
6		?
4		
2		

2) Complete the table. Which of the following represents an ordered pair for this expression.

- a) (2, -2)
- b) (5, 9)
- c) (5, 20)
- d) (7, 35)

<i>Input (x)</i>	$4x - 11$	<i>Output (y)</i>
2		
5		
7		

3) Identify the dependent quantity when x is 7.5

<i>Input (x)</i>	$2x - 5$	<i>Output (y)</i>
-2		
$\frac{1}{3}$		
7.5		

4) Identify the dependent quantity when x is 14

<i>Input (x)</i>	$x + 6$	<i>Output (y)</i>
		-3
		0
		2

5) Write an equation that represents the relationship between the independent and dependent quantities in this table.

a) $y = x - 3$

b) $y = \frac{x}{3}$

c) $y = \frac{x}{2.5}$

d) $y = 3 - x$

<i>Input (x)</i>	<i>Output (y)</i>
5	2
6	3
7	4

6) Write an equation that represents the relationship between the independent and dependent quantities in this table.

a) $y = x - 12$

b) $y = 14$

c) $y = \frac{x}{7}$

d) $y = 0 * x$

<i>Input (x)</i>	<i>Output (y)</i>
0	0
14	2
28	4

7) Write an equation that represents the relationship between the independent and dependent quantities in this table.

- a) $y = x + 24$
- b) $y = 8x$
- c) $y = 9x$
- d) *impossible*

<i>Input (x)</i>	<i>Output (y)</i>
3	27
6	54
7	63

8) What is the value of the n^{th} term in the sequence?

- a) 5
- b) $4n$
- c) $5n$
- d) 25

<i>Position (n)</i>	1	2	3	4	<i>n</i>
<i>Value of Term</i>	5	10	15	20	

9) What is the value of the sixteenth term in the sequence?

- a) $4n + 1$
- b) 65
- c) 67
- d) 23

<i>Position (n)</i>	6	7	8	9	<i>n</i>
<i>Value of Term</i>	25	29	33	37	

10) Grayson has a \$30 iTunes gift card and some money in his savings account. He can buy an item that is \$30 more than the amount in his savings account. Write an equation to find c the total amount he can spend relative to the amount of money in his savings account n .

- a) $c = 30$
- b) $n = 30$
- c) $n = c + 30$
- d) $c = n + 30$

11) A tutor charges \$30 per session. Write an equation that represents the cost y for x sessions.

- a) $y = 30 + x$
- b) $y = x + 30$
- c) $y = 30x$
- d) $y = 30$

12) Leah earns \$15 for every hour she works at the Mac store. How much will Leah earn if she works 32 hours?

(+)	0	0	0	0	0	.	0	0	
(-)	1	1	1	1	1		1	1	
	2	2	2	2	2		2	2	
	3	3	3	3	3		3	3	
	4	4	4	4	4		4	4	
	5	5	5	5	5		5	5	
	6	6	6	6	6		6	6	
	7	7	7	7	7		7	7	
	8	8	8	8	8		8	8	
	9	9	9	9	9		9	9	

13) Write an equation to represent the relationship between the independent and dependent quantities.

a) $y = 4x$

b) $y = \frac{4}{x}$

c) $y = \frac{x}{4}$

d) $y = 4 - 3$

<i>Input (x)</i>	4	8	12	16	20
<i>Output (y)</i>	1	2	3	4	5

14) Write an equation to represent the relationship between the independent and dependent quantities.

a) $y = 5 - 4$

b) $y = x - 4$

c) $y = \frac{5}{x}$

d) $y = \frac{x}{5}$

<i>Input (x)</i>	5	6	7	8	9
<i>Output (y)</i>	1	2	3	4	5

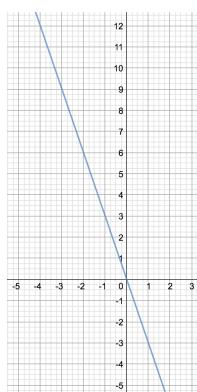
15) Determine if the relationship is an additive relationship.

- a) yes; $y = x + 17$
- b) no; $y = x - 17$
- c) yes; $y = 4x + 2$
- d) impossible; $y = 4x + 2$

Input (x)	5	6	7	8
Output (y)	22	23	24	25

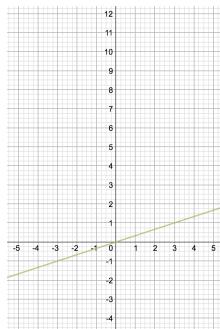
16) Which graph represents $y = 3(x)$

a) $y = 3(x)$

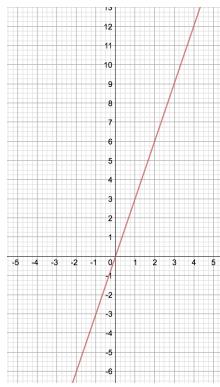


<i>Input (x)</i>	<i>Output (y)</i>
-1	
0	
1	
2	
3	

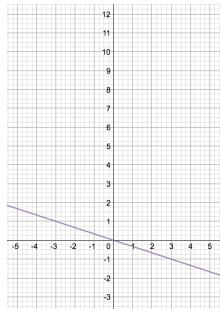
b) $y = 3(x)$



c) $y = 3(x)$

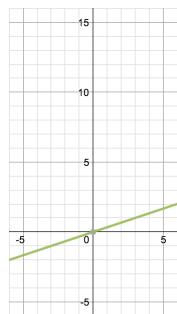


d) $y = 3(x)$

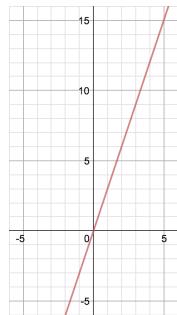


17) Which graph represents $y = x - 3$

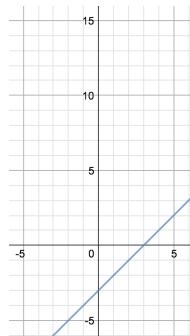
a) $y = x - 3$



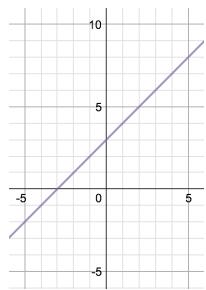
b) $y = x - 3$



c) $y = x - 3$



d) $y = x - 3$



<i>Input (x)</i>	<i>Output (y)</i>
-1	
0	
1	
2	
3	