

Name _____

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

1) Identify the dependent quantity when x is 5

<i>Input (x)</i>	$2x + 5$	<i>Output (y)</i>
4		
5		
6		

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

a) $(2, -5)$ b) $(2, 1)$ c) $(5, 8)$ d) $(7, 15)$

<i>Input (x)</i>	$3x - 7$	<i>Output (y)</i>
2		
5		
7		

3) Identify the dependent quantity when x is $\frac{1}{2}$

<i>Input (x)</i>	$8x - 7$	<i>Output (y)</i>
-2		
$\frac{1}{2}$		
7.5		

4) Identify the dependent quantity when x is 5

<i>Input (x)</i>	$x - 7$	<i>Output (y)</i>
		-1
		0
		2

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

a) $y = 5 - x$

b) $y = x + 5$

c) $y = x * 2.5$

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

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

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

a) $y = x * 0$

b) $y = x * 4$

c) $y = x + 6$

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

<i>Input (x)</i>	<i>Output (y)</i>
0	0
2	8
4	16

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

a) $y = \frac{x}{10}$

b) $y = \frac{x}{2}$

c) $y = x - 18$

d) $y = x * 10$

<i>Input (x)</i>	<i>Output (y)</i>
20	2
30	3
50	5

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

a) 5

b) $4n$

c) $5n$

d) 20

<i>Position</i>	1	2	3	4	n
<i>Value of Term</i>	4	8	12	16	

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

a) $n + 16$

b) $16n + 1$

c) 48

d) 64

<i>Position</i>	1	2	3	4	n
<i>Value of Term</i>	4	8	12	16	

10) A tutor charges \$25 per session. Write an equation that represents the cost y for x sessions.

a) $y = 25 + x$

b) $y = x + 25$

c) $y = 25x$

d) $y = x - 25$

11) Carly earns \$25 for every student she tutors. How much will Carly earn if she tutors 25 students?

12) Greg earns \$35 for every car that he gives an oil change. Write an equation that can be used to find y , the total amount Greg will earn after changing the oil in x cars.

(hint: $total = charge * car$)

a) $y = x + 35$

b) $y = 30$

c) $y = \frac{x}{35}$

d) $y = 35x$

13) Use the table to write an equation that represents the relationship between independent and dependent quantities.

a) $y = 1 + 4$

b) $y = 5x$

c) $y = x + 4$

d) $y = 2 * x$

<i>Input (x)</i>	1	2	3	4
<i>Output (y)</i>	5	10	15	20

14) Use the table to write an equation that represents the relationship between independent and dependent quantities.

a) $y = x - 14$

b) $y = x + 8$

c) $y = \frac{x}{8}$

d) $y = \frac{x}{-8}$

<i>Input (x)</i>	-16	-8	8	16
<i>Output (y)</i>	-2	-1	1	2

15) Determine if the relationship is an additive relationship.
(hint: $y = x + a$)

a) *no*

b) *yes*

<i>Input (x)</i>	2	4	6	8
<i>Output (y)</i>	5	15	35	65