

## Relationships and Proportional Reasoning

1. Inspect Data Sets A – D. Identify the relationship that each set of x-y data represent – linear, inverse, constant, or quadratic. Write the relationship name in the blank below the Data Set.

Set A			Set B			Set C			Set D		
Row	x	y	Row	x	y	Row	x	y	Row	x	y
A	2	2	A	1	4	A	2	12	A	2	4
B	4	8	B	3	12	B	3	8	B	4	8
C	6	18	C	4	16	C	4	6	C	6	12
D	8	32	D	9	36	D	6	4	D	8	16
E	12	72	E	12	48	E	8	3	E	12	24

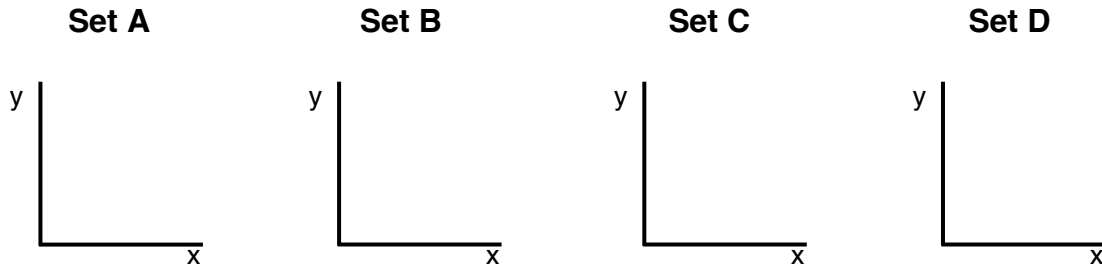
  


---

2. Match the statements to the Data Sets. Write a letter(s) in each blank.

- a. When x is doubled, y is doubled. → \_\_\_\_\_
- b. When x is doubled, y is halved. → \_\_\_\_\_
- c. When x is doubled, y is quadrupled. → \_\_\_\_\_

3. Sketch the look of the x-y plot for each Data Set:



4. For the indicated Data Sets, predict the value of y for each given value of x.

- a. Data Set A: When  $x = 24$ , the value of y will be \_\_\_\_\_.
- b. Data Set B: When  $x = 24$ , the value of y will be \_\_\_\_\_.
- c. Data Set B: When  $x = 2$ , the value of y will be \_\_\_\_\_.
- d. Data Set B: When  $x = 6$ , the value of y will be \_\_\_\_\_.
- e. Data Set C: When  $x = 16$ , the value of y will be \_\_\_\_\_.
- f. Data Set C: When  $x = 12$ , the value of y will be \_\_\_\_\_.
- g. Data Set D: When  $x = 24$ , the value of y will be \_\_\_\_\_.
- h. Data Set D: When  $x = 16$ , the value of y will be \_\_\_\_\_.