

PRACTICE

1.) Each table represents a linear relationship. Which table(s) represent a slope of 2? (*Show all your work*)

Table 1

| x | y |
|---|----|
| 0 | 32 |
| 3 | 26 |
| 5 | 22 |
| 9 | 14 |

$\frac{y}{x} = \frac{32-26}{0-3} = \frac{6}{-3} = -2$

Slope (m) = -2

Table 2

| x | y |
|---|---|
| 1 | 3 |
| 2 | 5 |
| 3 | 7 |
| 4 | 9 |

$\frac{y}{x} = \frac{7-5}{3-2} = \frac{2}{1} = 2$

Slope (m) = 2

Table 3

| x | y |
|---|----|
| 0 | 8 |
| 3 | 14 |
| 7 | 22 |
| 9 | 26 |

$\frac{y}{x} = \frac{22-14}{7-3} = \frac{8}{4} = 2$

Slope (m) = 2

2.) Calculate the rate of change (slope) between the points listed in each table. Determine if the table represents a proportional relationship.

a.

| x | y |
|----|----|
| 2 | 14 |
| 5 | 35 |
| 7 | 49 |
| 10 | 70 |

$\frac{y}{x} = \frac{21}{3} = 7$, $\frac{14}{2} = 7$, $\frac{21}{3} = 7$

Slope (m) = 7
 Circle one: Linear Non-linear

b.

| x | y |
|-----|-----|
| -10 | 50 |
| -2 | 10 |
| 4 | -20 |
| 14 | -70 |

$\frac{y}{x} = \frac{-40}{8} = -5$, $\frac{-30}{6} = -5$, $\frac{-50}{10} = -5$

Slope (m) = -5
 Circle one: Linear Non-linear

7 7 7 ✓

-5 -5 -5 ✓

| x | y |
|----|-----|
| -1 | -24 |
| 2 | 48 |
| 4 | 90 |
| 8 | 192 |

Slope (m) = $\frac{n}{a}$

Circle one: Linear Non-linear

Handwritten calculations for table c:
 $\frac{y}{x} = \frac{72}{3}, \frac{42}{2}, \frac{102}{4}$
 $\frac{72}{3} = 24, \frac{42}{2} = 21, \frac{102}{4} = 25.5$ (marked with an X)

| x | y |
|----|-----|
| -6 | 12 |
| -3 | 6 |
| 3 | -6 |
| 6 | -10 |

Slope (m) = $\frac{n}{a}$

Circle one: Linear Non-linear

Handwritten calculations for table d:
 $\frac{y}{x} = \frac{-6}{-2}, \frac{-12}{-2}, \frac{-4}{-1.3}$
 $\frac{-6}{-2} = 3, \frac{-12}{-2} = 6, \frac{-4}{-1.3} \approx 3.1$ (marked with an X)

| x | y |
|----|--------|
| 2 | 13.5 |
| 5 | 33.75 |
| 10 | 67.5 |
| 15 | 101.25 |

Slope (m) = 6.75

Circle one: Linear Non-linear

Handwritten calculations for table e:
 $\frac{y}{x} = \frac{33.75}{5}, \frac{33.75}{5}, \frac{20.25}{3}$
 $\frac{33.75}{5} = 6.75, \frac{33.75}{5} = 6.75, \frac{20.25}{3} = 6.75$

| x | y |
|----|------|
| -4 | -38 |
| -1 | -9.5 |
| 2 | 19 |
| 3 | 27 |

Slope (m) = $\frac{n}{a}$

Circle one: Linear Non-linear

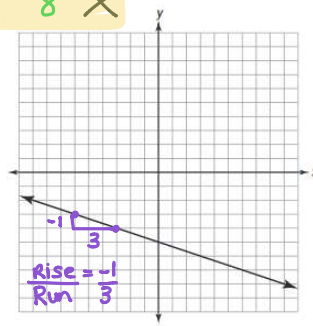
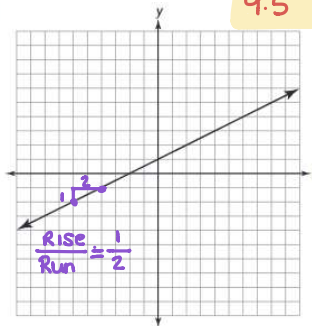
Handwritten calculations for table f:
 $\frac{y}{x} = \frac{28.5}{3}, \frac{28.5}{3}, \frac{8}{1}$
 $\frac{28.5}{3} = 9.5, \frac{28.5}{3} = 9.5, \frac{8}{1} = 8$ (marked with an X)

Review

3.) Determine the slope of each linear relationship.

- a. $m = \frac{1}{2}$
- b. $m = -\frac{1}{3}$
- c. $m = 2$

a.



c. $y = 2x$