

Digits 2.1

①

| | | | | |
|---|-----------------------------|------------------------------|---------------|------------------------------|
| x | 3 | 4 | 5 | 6 |
| y | 9 | 12 | 15 | 18 |
| R | ↓ | ↓ | $\frac{3}{1}$ | ↓ |
| | $\frac{9}{3} = \frac{3}{1}$ | $\frac{12}{4} = \frac{3}{1}$ | | $\frac{18}{6} = \frac{3}{1}$ |

Proportional means all ratios are = b/t x & y.

$$\frac{y}{x} = \left(\frac{3}{1} \right)$$

②

| | | | |
|-------|-------------------------------|-------------------------------|-------------------------------|
| Hrs | 2 | 3 | 4 |
| Score | 46 | 69 | 92 |
| R | $\frac{46}{2} = \frac{23}{1}$ | $\frac{69}{3} = \frac{23}{1}$ | $\frac{92}{4} = \frac{23}{1}$ |

Proportional means all ratios are = b/t score & hrs.

$$\frac{\text{Score}}{\text{hrs}} = \left(\frac{23}{1} \right)$$

③

| x | y | Ratio |
|----|----|--------------------------------|
| 11 | 33 | $\frac{33}{11} = 3 \checkmark$ |
| 12 | 36 | $\frac{36}{12} = 3 \checkmark$ |
| 13 | 39 | $\frac{39}{13} = 3 \checkmark$ |
| 14 | 42 | $\frac{42}{14} = 3 \checkmark$ |

Find ratio of $\frac{y}{x}$ for each value.

Does show proportion.

④

| | | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| x | 4 | 6 | 7 | 9 |
| y | 16 | 36 | 49 | 81 |
| | $\frac{16}{4} = 4$ | $\frac{36}{6} = 6$ | $\frac{49}{7} = 7$ | $\frac{81}{9} = 9$ |

Find ratios $\frac{y}{x}$

All ratios are diff

so NOT

Proportional.

⑤

| Seed | Area | R |
|------|------|--------------------------------|
| 1 | 23 | $\frac{23}{1} = 23 \checkmark$ |
| 2 | 46 | $\frac{46}{2} = 23 \checkmark$ |
| 3 | 69 | $\frac{69}{3} = 23 \checkmark$ |
| 4 | 92 | $\frac{92}{4} = 23 \checkmark$ |

Proportional

b/c all ratios are =

⑥

| Turkey | Cal | R |
|--------|-----|-----------------------------|
| 1 | 54 | $\frac{54}{1} = 54 \times$ |
| 2 | 72 | $\frac{72}{2} = 36 \times$ |
| 3 | 90 | $\frac{90}{3} = 30 \times$ |
| 4 | 108 | $\frac{108}{4} = 27 \times$ |

NOT Proportional

b/c all ~~values~~ ratios are \neq

⑦

| | | | | |
|---|----|-----|-----|------|
| x | 3 | 5 | 8 | 10 |
| y | 27 | 125 | 512 | 1000 |
| R | | | | |

$\frac{27}{3} = 9$ $\frac{125}{5} = 25$ $\frac{512}{8} = 64$ $\frac{1000}{10} = 100$

NOT Proportional

b/c all ratios are \neq

⑧

| | | | |
|------|---------------|---------------|---------------|
| Eggs | 4 | 5 | ⑥ |
| Milk | 12 | ⑮ | 18 |
| R | $\frac{3}{1}$ | $\frac{3}{1}$ | $\frac{3}{1}$ |

$$\frac{\text{Ratio}}{3} = \frac{x_{\text{milk}}}{5 \text{ eggs}}$$

$$x = 15$$

$$\frac{3}{1} = \frac{18}{x}$$

$$\frac{3x}{3} = \frac{18}{3}$$

$$x = 6$$

9

| | | | | |
|---|---------------|---------------|---------------|---------------|
| L | 3 | 4 | 5 | 6 |
| W | 18 | 24 | 30 | 36 |
| R | $\frac{6}{1}$ | $\frac{6}{1}$ | $\frac{6}{1}$ | $\frac{6}{1}$ |

$$\frac{18}{3} = \frac{6}{1}$$

$$\frac{30}{5} = \frac{6}{1}$$

$$\frac{6}{1} = \frac{x}{4} \quad x = 24$$

$$\frac{6}{1} = \frac{36}{x} \quad \frac{6x}{6} = \frac{36}{6}$$

$$x = 6$$

10

| | | | |
|---|----------------|----------------|----------------|
| X | 17 | $\frac{1}{4}$ | 7 |
| Y | $4\frac{1}{4}$ | $\frac{1}{16}$ | $1\frac{3}{4}$ |
| R | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

$$4\frac{1}{4} = \frac{17}{4}$$

$$\frac{\frac{17}{4} \cdot \frac{1}{4}}{\frac{17}{1} \cdot \frac{1}{17}} = \frac{1}{4}$$

Problem states Proportional which means all ratios =.

$$\frac{1}{4} = \frac{x}{\frac{1}{4}}$$

$$\frac{4x}{4} = \frac{1}{4} \cdot \frac{1}{4}$$

$$\frac{1}{4} = \frac{x}{7}$$

$$\frac{4x}{4} = \frac{7}{4}$$

$$x = 1\frac{3}{4}$$