RED Ch.5 Review

SLE: 3a) A life-long learner who: meets or exceeds curriculum standards

L.O. I will solve ratios.

Ratios

Write the ratio in simplest form.

56 naughty children : 14 nice children

$$\begin{array}{r|ll} 7 & 56 & 14 \\ \hline 2 & 8 & 2 \\ \hline & 4 & 1 \end{array}$$

4 naughty : 1 nice

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Rates

Rates compare different units of measurement.

The unit rate is simplified to have a denominator of 1.

Reindeer power: 250miles in 10 min.

$$\frac{250\text{ mi.}}{10\text{ min.}} \overset{\div 10}{\underset{\div 10}{=}} \frac{25\text{ mi.}}{1\text{ min.}}$$

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Proportions

Proportions are two ratios set equal to each other

Do the ratios form a proportion?

$$\frac{12}{22}, \frac{18}{33}$$

$\frac{12}{22} \neq \frac{18}{33}$

$33 \times 12 = 66 + 330 = 396$

$22 \times 18 = 176 + 220 = 396$

$396 = 396$ ✓

Yes

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Proportions

Are x and y in a proportional relationship?

x	1	3	6	8
y	4	12	24	32

$\frac{y}{x}$ $\frac{4}{1} = 4$ $\frac{12}{3} = 4$

same answer so, YES

$\frac{24}{6} = 4$ $\frac{32}{8} = 4$

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Proportions

Write a proportion from the table

x	1	3	6	8
y	4	12	24	32

$\frac{1}{4} = \frac{3}{12}$ (DO NOT SOLVE)

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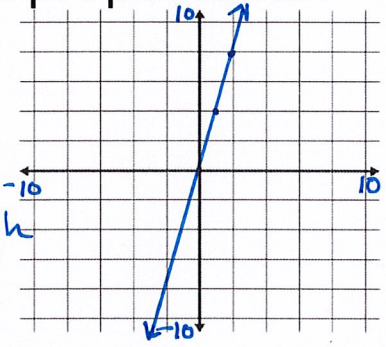
Proportions

Graph the table. Is it proportional?

x	1	3	6	8
y	4	12	24	32



Straight line through (0,0) so YES.

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Solve Proportions

$$\frac{7.2}{x} = \frac{5}{6}$$

$\frac{7.2(6)}{5} = x$

$7.2 \times 6 = 43.2$

$5 \overline{)43.20}$ → 8.64

-40

32

-30

20

-20

0

$x = 8.46$

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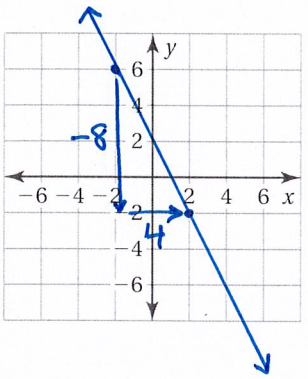
Slope

Graph the line that passes through

(-2, 6) and (2, -2)

What is the slope?

$\frac{\text{rise}}{\text{run}}$ (to right) $\quad \frac{y}{x} \quad \frac{-8}{4} = -2$



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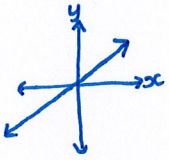
Direct Variation

Does x and y show direct variation?

EQUATION: $y = kx$ (k is a number but not zero)

GRAPH:



Straight line through (0,0)

TABLE:

x	2	4	6
y	8	16	24

$\frac{y}{x}$ $\quad \frac{8}{2} = 4 \quad \frac{16}{4} = 4 \quad \frac{24}{6} = 4$

Same number