

wh. pg. 34

$$2) \quad \frac{0.21}{40 \text{ million}} \\ \hline 8.4 \text{ million}$$

$$|n - 8.4_{\text{mil}}| = 3$$

2-6 Ratios and Proportions

Ratio - a comparison of two numbers by division.

Proportion - two ratios are equal.

$$\frac{0.349 \times 10}{10,000 \times 10} = \frac{3.49}{100,000} \qquad \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$

$$\frac{6}{10} \neq \frac{2}{5} \text{ No } \frac{2}{5} = \frac{4}{10}$$

$$\frac{1}{6} = \frac{5}{30} \text{ yes } \textcircled{\times 5}$$

Extremes (first and last terms) : Means (middle terms)

$$\boxed{0.2} : \boxed{1.5} = \boxed{1.2} : \boxed{9}$$

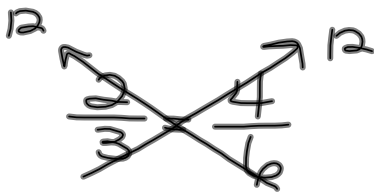
Extremes (first and last terms)

0.2 is to 1.5 as 1.2 is to 9

extremes

$$\frac{\boxed{0.2}}{\boxed{1.5}} = \frac{\boxed{1.2}}{\boxed{9}}$$

middle terms means



$$\textcircled{6} \frac{n}{10} = \frac{2 \times 3}{2 \times 5}$$

$$3(10) = 5n$$

$$\frac{30}{5} = \frac{5n}{5}$$

$$\textcircled{6} = n$$

$$\frac{n-2}{14} = \frac{2}{7}$$
$$7(n-2) = 2(14)$$
$$7n - 14 = 28$$
$$\begin{array}{r} 7n - 14 = 28 \\ +14 \quad +14 \\ \hline 7n = 42 \end{array}$$
$$n = 6$$

$$\frac{n+4}{5} = \frac{3}{8}$$

$$8(n+4) = 3(5)$$

$$8n + 32 = 15$$

-32 -32

$$\frac{8n}{8} = \frac{-17}{8}$$

$$n = \frac{-17}{8}$$

check:

$$\frac{-\frac{17}{8} + 4}{5} = \frac{3}{8}$$

$$\frac{8}{1} \left(-\frac{17}{8} + 4 \right) = 3(5)$$

$$-17 + 32 = 15$$

$$15 = 15 \quad \checkmark$$

rate - two units w/ different measurements

unit rate - how many per 1
(one) (1 in the denominator)

$$\frac{300 \text{ mi.}}{6 \text{ hr.}} = \frac{50 \text{ miles}}{1 \text{ hr}}$$

$$\frac{232 \text{ stores}}{2 \text{ yr.}} = \frac{348 \text{ stores}}{3 \text{ yr.}}$$

$$\begin{array}{r} \textcircled{116} \\ 2 \overline{)232} \end{array}$$

$$\begin{array}{r} 232 \\ + 116 \\ \hline 348 \end{array}$$

$$\frac{116 \text{ stores}}{1 \text{ yr.}}$$

rate = scale

$$\frac{3 \text{ in}}{10 \text{ mi}} = \frac{1 \frac{1}{8} \text{ in} \left(\frac{9}{8}\right)}{\left(3 \frac{3}{4}\right) \text{ mi.}}$$

$$\frac{5 \text{ cm}}{2 \text{ m}} = \frac{28.5 \text{ cm}}{11.4 \text{ m}}$$

2-6 assignment

10-44 evens
add 56 and 58