(12)

$\frac{18}{x} = \frac{54}{57}$ ($\div 3$ on 18 and 54; $\div 3$ on x and 57 → 19)

8.3 WS

$18 \times 57 = 54x$

$\frac{1026}{54} = \frac{54x}{54}$

$\frac{1026}{54} = x$

$19 = x$

8.3 WS

④ $\frac{x}{4} = \frac{4}{8}$ ÷2 ÷2

$x = 2$

⑬ $\frac{1}{2} = \frac{2350}{4,700m}$ ×2350

② $\frac{6}{8} \stackrel{?}{=} \frac{57}{76}$

$76 \cdot 6 = 57 \cdot 8$

$456 = 456$

⑭ $\frac{40}{1} = \frac{4,800}{120}$ ×120

8.3 ws

(15) $\frac{6}{8} = \frac{x}{20}$

$20 \cdot 6 = 8x$

$120 = 8x$

$x = 15$

(16) $\frac{15}{y} = \frac{21}{35}$

$525 = 21y$

$y = 25$

(17) $\frac{15}{12} = \frac{20}{c}$

$15c = 240$

$c = 16$

(18) 25 tulips

tulips $\frac{10}{6} = \frac{x}{15}$

roses

(19) $\frac{5}{3} = \frac{x}{108}$ $3x = 5 \cdot 108$

$3x = 540$

$x = 180$ family cars

(20)

miles	2	4	(6)	8
time	3	(6)	9	12

(21)

apples	5	10	(15)	20
weight	8	(16)	24	(32)

8.2 ws

① yes ② no ③ yes

④ $\frac{\$5}{1h} = \frac{\$15}{3h}$ (×3 on both)

⑤ $\frac{60mi}{2h} = \frac{180mi}{6h}$

$60x = 2(180)$

$60x = 360$

$x = 6$

⑥ $\frac{75 words}{6 min} = \frac{25 w.}{2 min}$

⑦ $\frac{120 lbs}{\$15} = \frac{8 lbs}{\$1}$

⑩ $\frac{15}{5} = \frac{3}{1}$

⑪ $\frac{21}{7} = \frac{3}{1}$

⑫ $\frac{72}{8} = \frac{9}{1}$

runs / games $\frac{432}{72} = \frac{6}{1}$

$\div 72$

(15) $\frac{65}{1} \overset{\times 6}{=} \frac{390}{6}$ miles / time

$\times 6$

Unit Rate: $\frac{120 \text{ lbs}}{\$ 15} \overset{\div 15}{=} \frac{8}{1}$

$\div 15$

2/28 8.4 Proportions and Scale Drawings

* A SCALE on a drawing is a RATIO that means for every length, it represents an actual distance

(P) 388 I.T.R.W. 1 in. : 2.5 ft.

① Turn SCALE into a fraction.

② Write an equivalent fraction with what info is given.

$$\frac{1\text{ in.}}{2.5\text{ ft.}} = \frac{0.6\text{ in.}}{x}$$

$x = 7$ ft.

③ Cross multiply ~ divide

(9) 1 in : 50 mi
4.5 in.

$\frac{1\text{ in}}{50\text{ mi}} = \frac{4.5\text{ in.}}{x}$

$x = 50(4.5)$

$x = 225\text{ mi}$

$$\begin{array}{r} {\scriptstyle 2} \\ 4.5 \\ \times\ 50 \\ \hline 00 \\ +225 \\ \hline 225.0 \end{array}$$

1 in : 2.5 ft.

$\frac{1}{2.5} = \frac{0.6}{x}$ $\quad 0.6 \times 2.5 = 1x$

$1.5 \text{ ft.} = x$

$\frac{1 \text{ in}}{2.5 \text{ ft.}} = \frac{x}{5.5 \text{ ft}}$

$2.5 \overline{)5.5\,0}$

2.2

$-5\,0$

50

$\frac{2.5x}{2.5} = \frac{1(5.5)}{2.5}$

$x = 2.2 \text{ in.}$

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in. $\frac{1}{2.5} = \frac{x}{5.5}$ $2.5x = 5.5$

feet $x = 2.2$ in.

in. $\frac{1}{2.5} = \frac{0.6}{x}$ $x = 2.5 \times 0.6$

$2.5\overline{)5.5}$

Finding RATIOS of Perimeter

p. 389 Ex 2

1 in : 10 ft

$2 \cdot 2 + 1 \cdot 2 = 6$ in.

l w

Finding RATIOS of Area

$A = l \times w$

$A = 2 \cdot 1 = 2 \text{ in}^2$

$A = 20 \cdot 10 = 200 \text{ ft}^2$

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$$\frac{\text{Perimeter of drawing}}{\text{Perimeter of Mural}} = \frac{6\text{in}}{60\text{ft}} = \frac{1\text{in}}{10\text{ft}}$$

$$\frac{\text{Area of Drawing}}{\text{Area of mural}} = \frac{2\text{in}^2}{200\text{ft}^2} = \frac{1\text{in}^2}{100\text{ft}^2}$$

In Class:

p. 390-391
#s 1-9, 14-18

HW: ws 8.4