$\frac{(3x+8)}{2} = -\frac{6}{3}$

$3(3x+8) = (2)(-6)$

$9x + 24 = -12$

$-24 \quad -24$

$\frac{9x}{9} = \frac{-36}{9}$

$x = -4$

$\left(\frac{(3x+8)}{2} = -\frac{6}{3}\right)6$

$6\left(\frac{(3x+8)}{2}\right) = 6\left(-\frac{6}{3}\right)$

$3(3x+8) = (2)(-6)$

$\frac{(2)(3x+8)}{2} = -2(2)$

$3x + 8 = -4$

$$2(x+8) - x = 5x + 8$$

$$2x + 16 - x = 5x + 8$$

$$x + 16 = 5x + 8$$

$$-x \qquad\qquad -x$$

$$16 = 4x + 8$$

$$-8 \qquad\qquad -8$$

$$\frac{8}{4} = \frac{4x}{4}$$

$$2 = x$$

$6 : x = 9 : 12$ (÷3 ÷3)

$\frac{6}{x} = \frac{9}{12}$

$\frac{9x}{9} = \frac{72}{9}$

$x = 8$

$6 : x = 3 : 4$ (×2 ×2)

$x = 8$

ICA - Friday

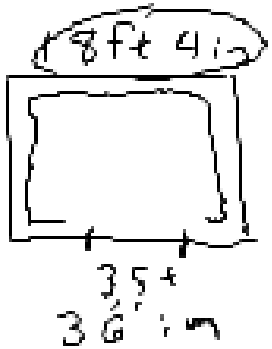
- Solving equations
- Ratios
  - 1 : 1
  - 1 : 3

Homework Review

$1.69/ft

15, 16, 22 220 in

15a)



$(18\text{ ft } 4\text{ in}) \times 4$

$= 18\text{ ft} \times \frac{12\text{ in}}{1\text{ ft}} = 216\text{ in}$

$(220\text{ in}) \times 4 = 880\text{ in} - 36\text{ in} = 844\text{ in}$

$844\text{ in} \times \frac{1\text{ ft}}{12\text{ in}} = 70.3333\ldots\text{ ft}$

$70.3333\ldots\text{ ft} \times \frac{\$1.69}{\text{ft}} = \$118.86$

16 puzzle / tower = 1 : 360 = 35.4 in : x puzzle / tower or ft

$$\frac{1}{360} = \frac{35.4}{x}$$

$$x = (360)(35.4)$$

$$x = 12744 \text{ in}$$

$$12744 \text{ in} \times \frac{1 \text{ ft}}{12 \text{ in}} = \boxed{1062 \text{ ft}}$$

22.

0.4 in : \$10 = (100 mi) : x

$$100\text{mi} \times \frac{1760\text{yd}}{1\text{ mi}} \times \frac{3\text{ Ft}}{1\text{ yd}} \times \frac{12\text{ in}}{1\text{ Ft}} =$$

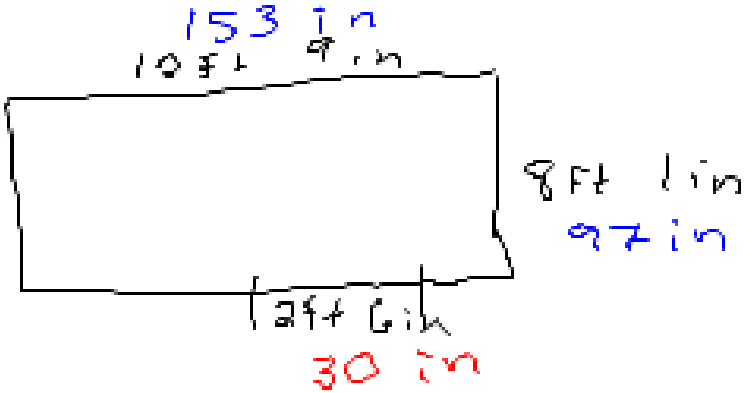
6 336 000 in

0.4 in : \$10 = 6 336 000 : x

$$\frac{0.4}{10} = \frac{6\,336\,000}{x}$$

$$\frac{0.4x}{0.4} = \frac{6\,336\,000}{0.4} \qquad x = \$1\,584\,000\,000$$

14.



$P = 2l + 2w = 2(153) + 2(97) =$ 500 in

500 − 30

P in − Door in = 470 in

$$470 \text{ in} \times \frac{1 \text{ ft}}{12 \text{ in}} = \frac{39.1667 \text{ ft}}{12} = 3,2\ldots$$

b) 4 rolls

c) $\$12.49/\text{roll} \cdot 4 = \$49.96$

1.3 Relating SI and Imperial Units

1. A Canadian football field is approximately 59 m wide.

What is this measurement to the nearest foot?

m → ft

1 ft = 30.48 cm

100 cm = 1 m

m → yd → ft

1 yd = 0.9144 m

$$59\ \text{m} \times \frac{100\ \text{cm}}{1\ \text{m}} \times \frac{1\ \text{ft}}{30.48\ \text{cm}} = \left(\frac{59 \times 100}{30.48}\right)\text{ft}$$

$$= 193.57\ \text{ft}$$

194 ft

Comparing => MUST HAVE SAME UNITS

2. After meeting in Osoyoos, B. C., Takoda drove 114 km north and Winona drove 68 mi. south. Who drove farther?

68 mi → km

1 mi = 1.609 km

$$68 \text{ mi} \times \frac{1.609 \text{ km}}{1 \text{ mi}} = 109.4 \text{ km}$$

Takoda

convert height to → in
or → ft.

3. Nora knows that she is 5 ft. 7 in. tall.

a) What height in centimetres will she list on her driver's license application? nearest cm.

Nora's height

$5\text{ ft} \times \frac{12\text{ in}}{1\text{ ft}} = 60\text{ in} + 7\text{ in} = 67\text{ in}$

in → cm 1 in = 2.54 cm

$67\text{ in} \times \frac{2.54\text{ cm}}{1\text{ in}} = 170.18\text{ cm}$

170 cm

Homework
p. 92 #4-6, 8

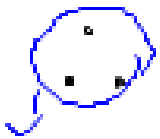
ft → m

ft → cm → m
OR ft → yd → m

4. A truck driver knows that his load is 15 ft. wide. Regulations along his route state that any load over 4.3 m wide must have wide-load markers and an escort with flashing lights. Does this vehicle need wide-load markers? Justify your answer.

$$15\ \text{ft} \times \frac{30.48\ \text{cm}}{1\ \text{ft}} \times \frac{1\ \text{m}}{100\ \text{cm}} = \left(\frac{15 \times 30.48}{100}\right)\text{m}$$

$$\approx 4.57\ \text{m} > 4.3\ \text{m}$$



Therefore he needs wide-load markers.