

$$34.) \quad \frac{32 \text{ mi}}{1 \text{ gal}} \quad \frac{15 \text{ m}}{1 \text{ ml}} \quad \frac{6600 \text{ yd}}{1 \text{ qt.}}$$

$$\frac{1 \text{ mi.}}{1.609 \text{ km}} \quad \frac{1.609 \text{ km}}{1 \text{ mi.}} \quad \frac{1000 \text{ m}}{1 \text{ km}} \quad \frac{1 \text{ km}}{1000 \text{ m}} \quad \frac{1 \text{ gal}}{3.785 \text{ l}} \quad \frac{3.785 \text{ l}}{1 \text{ gal}}$$

$$\frac{1000 \text{ ml}}{1 \text{ l.}} \quad \frac{1 \text{ l}}{1000 \text{ ml}}$$

$$\frac{32 \text{ mi.}}{1 \text{ gal}} \times \frac{1.609 \text{ km}}{1 \text{ mi.}} \times \frac{1000 \text{ m}}{1 \text{ km}} \times \frac{1 \text{ gal}}{3.785 \text{ l}} \times \frac{1 \text{ l}}{1000 \text{ ml}} = \frac{51,488}{3785}$$

$$= \frac{13.6 \text{ m}}{1 \text{ ml}}$$

$$\frac{6600 \text{ yd}}{1 \text{ qt.}} = \frac{6.38 \text{ m}}{1 \text{ ml.}}$$

$$\frac{1 \text{ yd}}{0.914 \text{ m}} \quad \frac{0.914 \text{ m}}{1 \text{ yd}} \quad \frac{1 \text{ qt}}{0.946 \text{ l}} \quad \frac{0.946 \text{ l}}{1 \text{ qt}} \quad \frac{1 \text{ l}}{1000 \text{ ml}} \quad \frac{1000 \text{ ml}}{1 \text{ l.}}$$

$$\frac{6600 \text{ yd}}{1 \text{ qt.}} \times \frac{0.914 \text{ m}}{1 \text{ yd}} \times \frac{1 \text{ qt.}}{0.946 \text{ l}} \times \frac{1 \text{ l}}{1000 \text{ ml}} = \frac{6032.4}{946}$$

$$= \frac{6.38 \text{ m}}{1 \text{ ml}}$$

$$40. 14 \text{ pt} \equiv 6622 \text{ ml}$$

$$\left(\frac{1 \text{ pt}}{0.473 \text{ l}} \right) \frac{0.473 \text{ l}}{1 \text{ pt}} \left(\frac{1 \text{ l}}{1000 \text{ ml}} \right) \frac{1000 \text{ ml}}{1 \text{ l}}$$

$$\frac{6622 \text{ ml}}{1} \times \frac{1 \text{ l}}{1000 \text{ ml}} \times \frac{1 \text{ pt}}{0.473 \text{ l}} = \frac{6622}{473} = 14 \text{ pt}$$

$$36. \frac{1500 \text{ gal}}{1 \text{ min.}} = \frac{\text{ l }}{\frac{1}{4} \text{ min}}$$

$$\frac{1 \text{ gal}}{3.785 \text{ l}} \quad \left(\frac{3.785 \text{ l}}{1 \text{ gal.}} \right)$$

$$\frac{1500 \text{ gal}}{1 \text{ min}} \times \frac{3.785 \text{ l}}{1 \text{ gal}} = \frac{5677.5}{1 \text{ min}} \times \left(\frac{1}{4} \right) = 1419.375 \approx 1419.38 \text{ l}$$

44 500 francs = _____ dollars

$$\frac{4.784 \text{ f}}{1 \$} \quad \frac{1 \$}{4.784 \text{ f}}$$

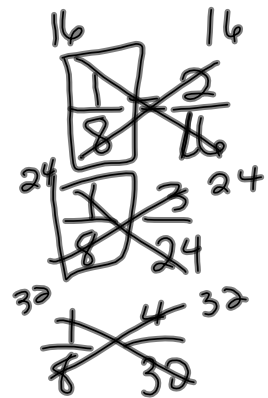
$$\frac{500 \cancel{\text{f}}}{1} \times \frac{1 \$}{4.784 \cancel{\text{f}}} = \frac{500}{4.784} = \$104.52$$

6-4 Proportional vs non proportional Relationships

$$\frac{1}{2} = \frac{2}{4} \text{ proportion}$$

constant rate of change

# of spiders	1	2	3	4
# of legs	8	16	24	32



1	2	3	4
50	70	90	110

$$\frac{70}{50} \neq \frac{100}{70}$$

$$\frac{90}{50} \neq \frac{150}{90}$$

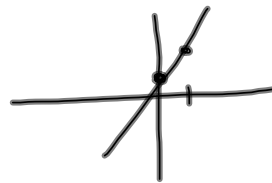
$$\frac{110}{50} \neq \frac{200}{110}$$

$$y = kx$$

k = constant ration
 constant # you multiply

$$y = mx + b$$

| slope
| y intercept



$$\frac{2.5 \text{ lbs}}{\$ 7.20}$$

$$\frac{\$ 7.20}{2.5 \text{ lbs}} =$$

$$\frac{\$ 2.88}{1 \text{ lb.}}$$

rate constant of proportionality

$y = kx$

$y = 2.88(4)$
 $y = 11.52$

