"I got you ten roses. I believe strong relationships are based on the metric system."

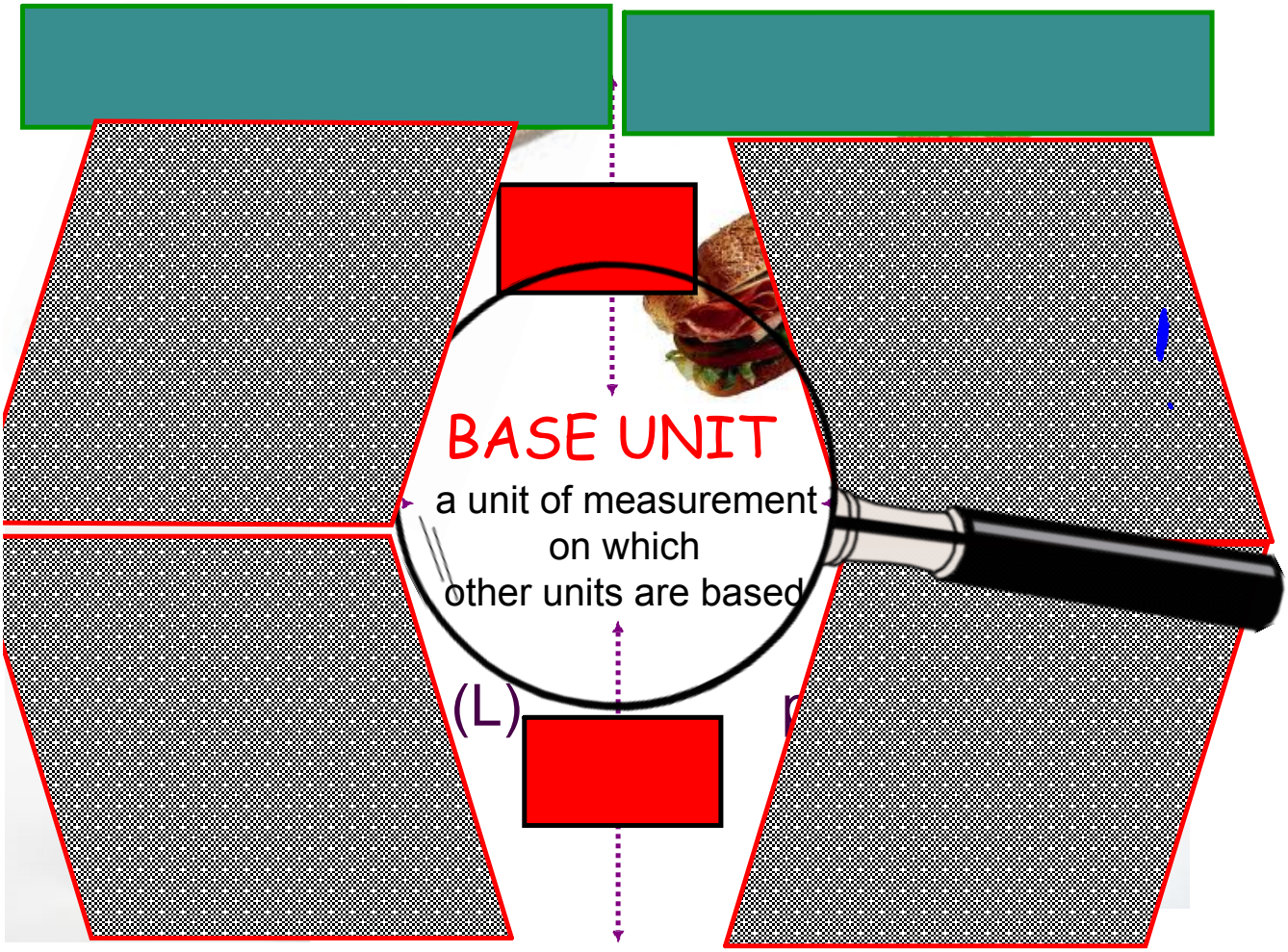
International System of Units (SI)

Système Internationale d'Unités

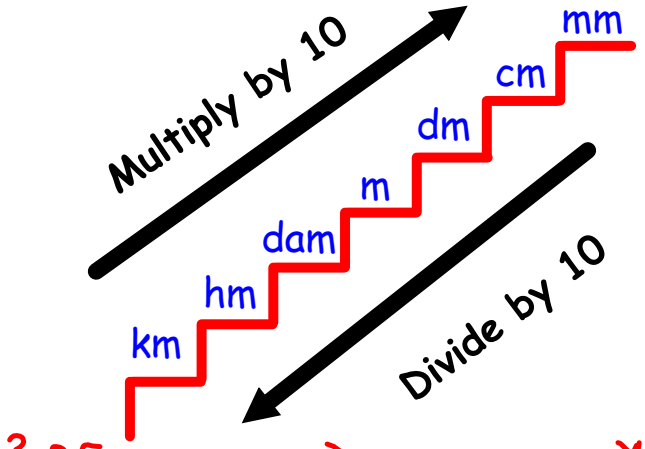
"metric"

Imperial System

"standard"


BASE UNIT
a unit of measurement
on which
other units are based
(L)

The SI is a decimal system based on multiples of 10



a) 130 cm = 1.3 m

b) 1.5 g = 150 mg

c) 60 L = 60 000 ml

d) 3.25 km = 325 000 cm

e) 680 g = 0.68 kg

3.25 →

km hm dam m dm cm mm

kl hl dal L dl cl ml

kg hg dag g dg cg mg

0.68 →

The Imperial system is NOT a decimal system

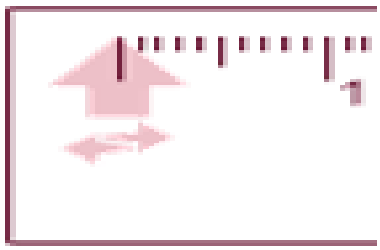
Each group of units
has a particular relationship.

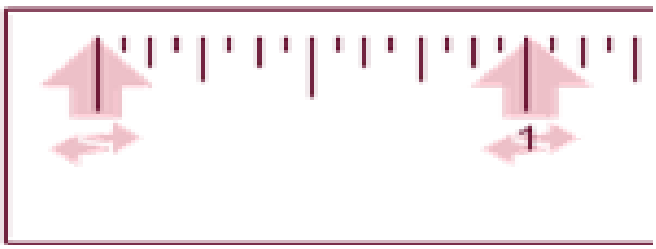
Some Common Imperial Units

Length	
Unit	*Abbreviation*
inch	in or "
foot	ft or '
yard	yd
mile	mi

" in
' ft
yd
mi

Take a closer look!!





Each group of units
has a particular relationship.

inch
foot
yard
mile

12 in = 1 foot

3 feet = 1 yard

1760 yards = 1 mile

Imperial CONVERSIONS

Conversion Factor

$$\text{Number} \times \frac{\text{want}}{\text{have}}$$

Convert 20ft to inches

$$\text{Number} \times \frac{\text{want}}{\text{have}}$$

$$20 \times \frac{\text{inches}}{\text{ft.}}$$

$$20 \times \frac{12}{1} \leftarrow \qquad 20 \times 12 = 240\text{in}$$

Imperial CONVERSIONS

Convert 240" to feet

$$\text{Conversion Factor} = \frac{\text{units you want}}{\text{units you have}}$$

$$= \frac{\text{feet}}{\text{inches}}$$

$$= \frac{1}{12}$$

Number x Conversion Factor

240 x 1/12

= 240/12

= 20

You try:

Perform the following conversions:

a) 36 inches to feet

b) 10 yards to feet

c) 5000 yards to miles

a) 36 inches to feet

$$36 \times \frac{w}{h}$$

$$36 \times \frac{ft}{in}$$

$$36 \times \frac{1}{12} \quad \frac{36}{12} = 3ft.$$

b) 10 yards to feet

$$10 \times \frac{\text{want}}{\text{have}}$$

$$10 \times \frac{\text{ft}}{\text{yds}}$$

$$10 \times \frac{3}{1}$$

$$= 30 \text{ ft.}$$

c) 5000 yards to miles

$$5000 \times \frac{\text{want}}{\text{have}}$$

$$5000 \times \frac{\text{mi}}{\text{yds}}$$

$$5000 \times \frac{1}{1760}$$

$$\frac{5000}{1760} = 2.84 \text{ mi}$$

Homework - Finish Worksheet

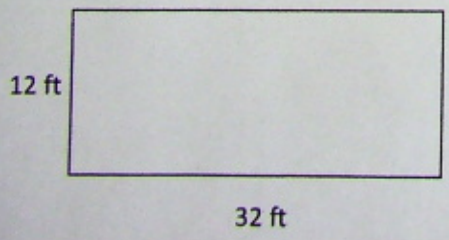
Conversion – (Worksheet #2)

1. Calculate the following conversions:

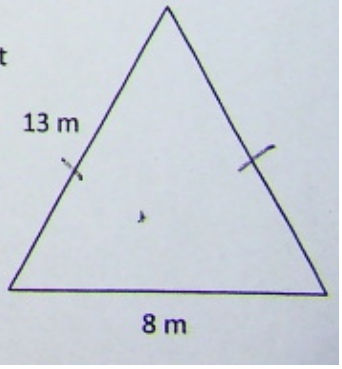
a) 30 mi. _____ km
b) 60 in. _____ cm
c) 30g _____ kg
d) 36 oz _____ lb
e) 5000 yd _____ mi

2. Calculate the following perimeters:

a) Calculate in inches

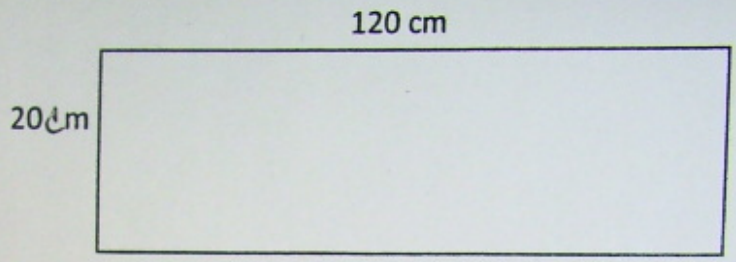
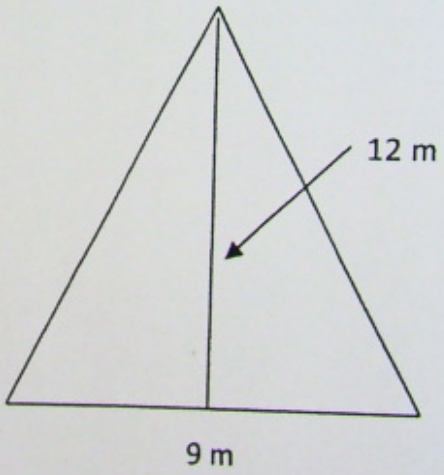


b) Calculate in feet



3. Calculate the following areas in the indicated measurements:

a) inches



b) feet