Warm-Up Question
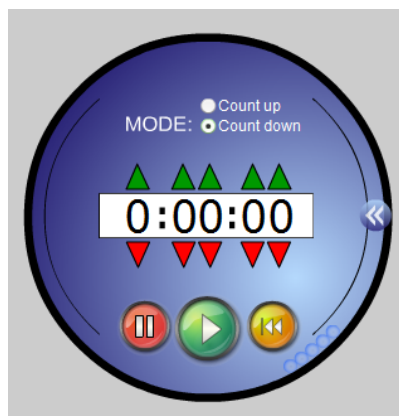
Convert each measure.

a) 0.87 L to cL   b) 24.08 bg to dg

K H D U D C M

=87 cL

=24 080. dg

You have 6 minutes to start #1-20 on the steel ruler handout.

MODE: ○ Count up ○ Count down

0:00:00

THE IMPERIAL SYSTEM

Today, the __imperial__ __system__ of measurement is most widely

used in the __United__ __States__ and in a few __Caribbean__

countries. Even though Canada officially adopted the __metric__

__system__ in __1970__, many Canadian industries continue

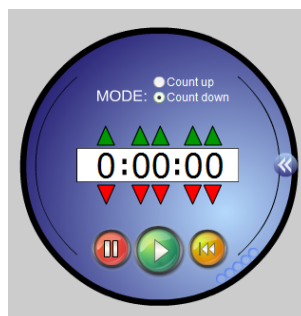to use the __imperial__ __system__.

FRACTIONS OF AN INCH

The inch is the smallest measure of length in the imperial system. Whole inches are the tallest lines on a ruler. When measuring length that are not a whole inch, fractions of an inch are used.
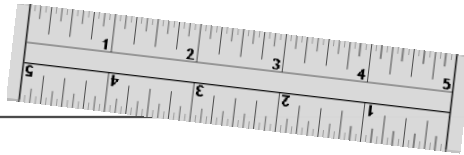
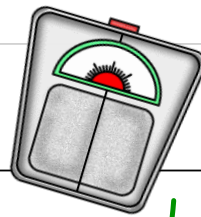Find the measures of the following bolts in inches.

$1\frac{1}{2}$ "

$2\frac{1}{8}$ "

$2\frac{15}{16}$
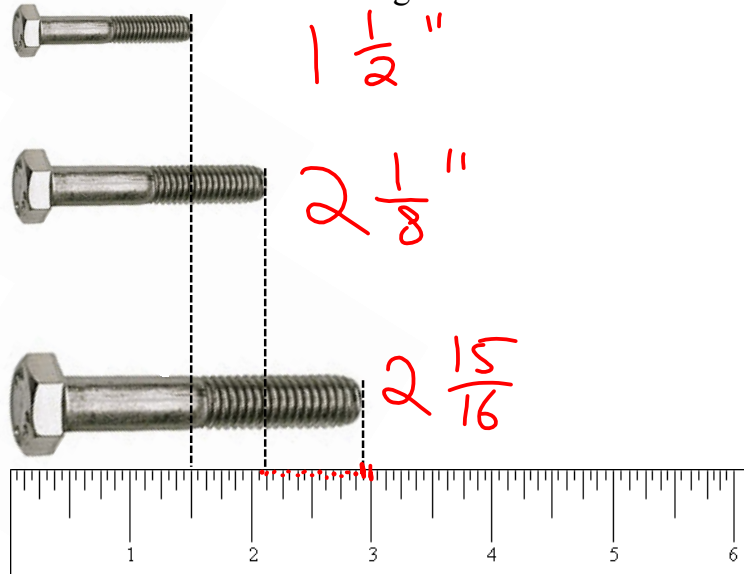
You have 6 minutes to start #21-40 on the steel ruler handout.

IMPERIAL - IMPERIAL CONVERSION TABLES

Length					
1 ft	=	12 in	1 in	=	$\frac{1}{12}$ ft
1 yd	=	3 ft	1 ft	=	$\frac{1}{3}$ yd
1 mi	=	1760 yd	1 yd	=	$\frac{1}{1760}$ mi

Mass					
1 lb	=	16 oz	1 oz	=	$\frac{1}{16}$ lb
1 T	=	2000 lb	1 lb	=	$\frac{1}{2000}$ T
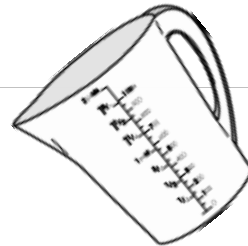
Volume					
1 pt	=	16 fl oz	1 fl oz	=	$\frac{1}{16}$ pt
1 qt	=	2 pt	1 pt	=	$\frac{1}{2}$ qt
1 gal	=	4 qt	1 qt	=	$\frac{1}{4}$ gal
1 c	=	8 fl oz	1 fl oz	=	$\frac{1}{8}$ c

EXAMPLES
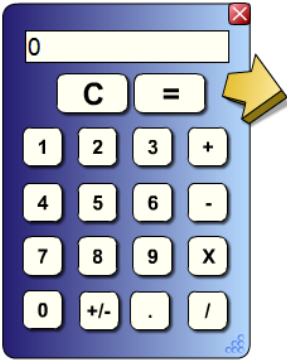
1. Complete the following conversions:

a) 2 ½ ft to inches

$$= 2.5 \times 12$$
$$= 30$$
$$\therefore 2\tfrac{1}{2}' = 30''$$

b) 48 oz to pounds

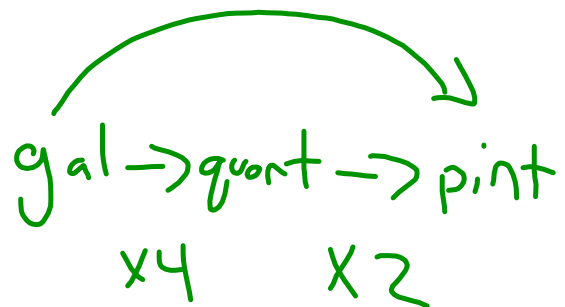$$= \frac{48}{1} \times \frac{1}{16}$$

$$= \frac{48}{16} = 3$$

$$\therefore 48oz = 3 \, lbs$$

c) 3 gal to pints

$$= 3 \times 4 \times 2$$
$$= 24$$

$$\therefore 3gal = 24 \, pints$$

$$gal \rightarrow quart \rightarrow pint$$
$$\times 4 \qquad \times 2$$

2. Convert 2¼ cups to fluid ounces.

$$2\tfrac{1}{4} = 2.25$$

$$= 2.25 \times 8$$

$$= 18 \qquad \therefore 2\tfrac{1}{4} c = 18 \, fl \, oz$$

3. Convert the following fluid ounces to pints.

a) 80 fl oz

$$= \frac{80}{1} \times \frac{1}{16}$$

$$= 5 \text{ pints}$$

$\therefore 80 \text{ fl oz} = 5 \text{ pints}$

b) 44 fl oz

$$= \frac{44}{1} \times \frac{1}{16}$$

$$= 2.75$$

$\therefore 44 \text{ fl oz} = 2.75 \text{ pints}$

4. Calculate the cost, including taxes, to carpet your bedroom that has dimensions 10 ft by 13 ft. The carpet cost $20.50 / square yard.

* Do conversions first

$$= 10 \times \frac{1}{3} \qquad = 13 \times \frac{1}{3}$$

$$= 4.33$$

$$= 3.33$$

$$A = l \times w$$

$$A = 3.33 \times 4.33$$

$$= 14.41 \text{ sq yr}$$

$$\text{Cost} = 14.41 \times 20.50$$

$$= 295.41$$

$$\text{total cost} = 295.41 \times 1.13$$

$$= \$ 333.81$$