

# Imperial Units: Mass and Capacity



## Lesson 11

## Lesson Eleven Concepts

- Investigate, discuss and describe applications from the everyday life and the workplace that would involve the measurement of mass and capacity.
- Record measurements, using commonly accepted abbreviations for the chosen units.
- Investigate, identify and use personal referents to aid in the estimation of mass and capacity.
- Estimate and use measurements of mass and capacity in everyday situations.

### Measure of Mass and Capacity in the Imperial System

How much does it weigh? (**mass**)

How much does it hold? (**capacity**)

In the imperial system there are **two main units of measurement** that are used for **mass**.

1. pounds (lb)
2. ounces (oz)

Here are some examples of what each measurement might look like.

**Pound (lb)**



About 1 lb

**ounce (oz)**

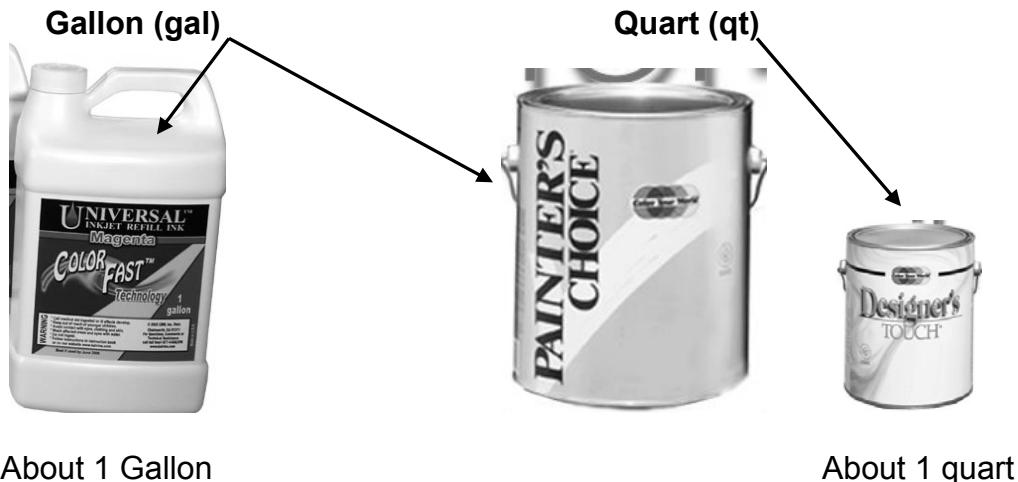


About 1 oz

In the imperial system there are **two main units of measurement** that are used for **capacity**.

1. gallon (gal)
2. quart (qt)

Here are some examples of what each measurement might look like.



### Key imperial system conversions for mass and capacity

There are 16 ounces in one pound (**mass**)

There are 4 quarts in one gallon (**capacity**)

#### Example

a. Choose the best measure for the mass of a baseball.

1 oz                    5 ozs                    30 ozs

Answer: A baseball's mass is approximately 5 ozs.

b. Choose the best measure for the capacity of a glass of milk.

$\frac{1}{2}$  quart                    4 quarts                    19 quarts

Answer: The capacity of a glass of milk is approximately  $\frac{1}{2}$  quart.



## Support Questions

1. Choose the best measure.

a. Mass of newborn child	1 lbs	7 lbs	20 lbs
b. Mass of a bag of potato chips	1 oz	8 oz	20 oz
c. Mass of a mid-sized car	50 lbs	1 500 lbs	10 000 lbs
d. Mass of a cat	1 lbs 6 oz	8 lbs 2 oz	45 lbs 13 oz
e. Mass of an adult male	18 lbs	170 lbs	500 lbs

2. Choose the best measure.

a. Small glass of juice	1/2 qt	$\frac{1}{2}$ gal
b. Jug of milk	4 qts	4 gals
c. Can of soup	2 qts	8 gals
d. Bottle of mouthwash	2.2 qts	2.2 gal
e. A full bathtub of water	35 qts	35 gal



3. Choose the best measure for each.

a. Can of apple juice	2 qts	20 qts	80 qts
b. Plate	2 oz	2 lbs	20 lbs
c. tennis ball	2 oz	2 lbs	20 lbs
d. Swimming pool	50 qts	50 gals	5 000 gals

4. Estimate each measurement using appropriate units.

- Capacity of a cup of hot chocolate in quarts.
- Mass of a stove in pounds
- Capacity of tea kettle in gallons
- Mass of a Barbie doll in ounces.

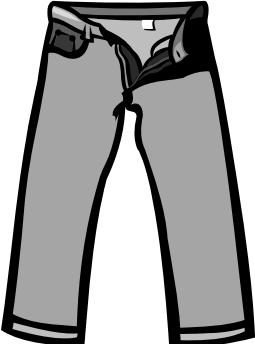


## Key Question #11

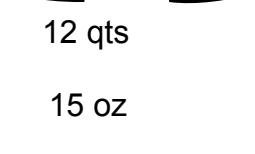
1. Choose the best measure for capacity.

a. Bottle of baby shampoo	1 qt	1 gal
b. Kitchen sink full of water	2 qts	2 gals
c. Large container of juice	$\frac{1}{2}$ qt	$\frac{1}{2}$ gal
2. Choose the best measure for the mass of each object.

a. Pair of jeans	2 oz	2 lbs
b. Bar of soap	3 oz	3 lbs
c. teaspoon of sugar	$\frac{1}{2}$ oz	$\frac{1}{2}$ lb


3. Choose the best measure for each.

a. Bottle of pop	1/2 qt	4 qts
b. Flintstone multi-vitamin	$\frac{1}{4}$ oz	1 oz
c. Apple	1 oz	1 lb


4. Estimate each measurement.

a. Mass of CD player in ounces		
b. Mass of a horse in pounds		
c. Capacity of cereal bowl in quarts		


5. Even though Canada has adopted the metric system can you think of two examples where Canadians still use the imperial system as a form of measurement?