

MATH 10 – UNIT 1 – LESSON 2 - INTRODUCTION TO MEASUREMENT

MEASUREMENT UNIT

Name: _____

For this lesson, you will need: a ruler with imperial units & 4 pieces of measured paper (A,B,C,D)

SYSTEMS OF MEASUREMENT

Metric System: SI units (Système International d'Unités) has been used in Canada since 1976 and is now used in most countries worldwide.

Examples:

gram (weight) litre (volume) metre (distance)

Imperial System: a measurement system used widely in the British Empire, though most countries have now converted to the SI system of measures.

Examples:

pound (weight) miles/feet/inches (distance)

REFERENTS FOR IMPERIAL UNITS OF MEASURE

Referent: Something you know that is used to estimate a unit of measure.

Thumbs up!

1. Use the length of your thumb from its tip to the first joint as a measuring instrument.
2. Use your thumb to estimate then record the length of your pencil and the dimensions of your binder in thumb units.

Pencil Length: 5 thumb units Binder Width: 13 thumb units Binder Length: 7½ thumb units

3. Use a ruler or measuring tape to measure each length in imperial units.

Pencil Length: 6 inches Binder Width: 13½ inches Binder Length: 9 inches

Big Foot!

1. Take off your shoe (and plug your nose!)
2. Measure the length of your shoe to the closest foot (12 inches): 10½ in.

Imperial Unit	Abbreviation	Referent	Relationship between Units
Inch	in.	thumb length from knuckle	
Foot	ft.	length of foot/shoe	1 ft = 12 in.
Yard	yd.	arm span.	1 yd = 3 ft = 36 in.
Mile	mi.	distance walked in 20 min.	1 mi. = 1760 yd. = 5280 ft.

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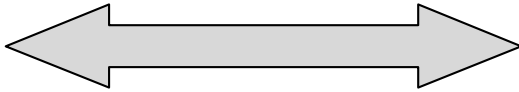
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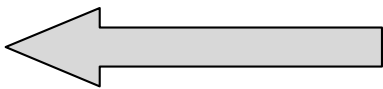
How to read a ruler in fractions of an inch!



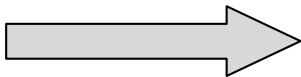
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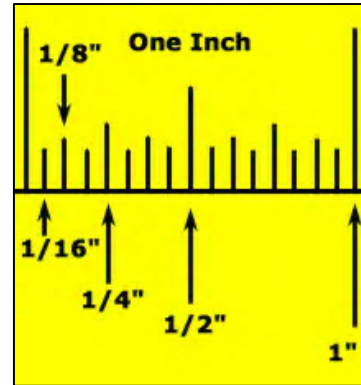
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Measure it! Measure the dimensions of each piece of paper provided by the teacher.

NOTE: A fraction of an imperial measure is usually written as a mixed number, not as a decimal.

A: ____ x ____ in. B: ____ x ____ in. C: ____ x ____ in. D: ____ x ____ in.

Let's practice our mixed numbers! Convert the following decimal numbers to mixed numbers.

1. 9.3
 \downarrow tenth
 $9 \frac{3}{10}$

3. 12.8
 $12 \frac{8}{10} = 12 \frac{4}{5}$

5. $9.75 = 9 \frac{75}{100} = 9 \frac{3}{4}$

2. 2.4
 $2 \frac{4}{10} = 2 \frac{2}{5}$

4. 7.25
 \downarrow hundredths
 $7 \frac{25}{100} = 7 \frac{1}{4}$

6. $3.625 = 3 \frac{625}{1000} = 3 \frac{25}{40}$
 $= 3 \frac{5}{8}$

Lesson 2 Homework: WS 10-1-2 "Measuring in Inches"