The measurements that scientists use are based on the International System of Units (SI), which is a form of the metric system. It is the world's most widely used system of units, both in science and business. It is useful to scientists because it is based on multiples of 10. The SI was developed in 1960 from an older metric system and is used in almost every country.
The SI is not static, as the technology of measurement progresses, units are created and definitions are changed through international agreement among many nations. The international system of units is made up of a seven base units, shown in the SI Base Units Table below . From these seven base units several other units are derived.

	Name	Symbol	Quantity
	meter	m	length
	kilogram	kg g	mass
	second	s	time
	ampere	A	electric current
	kelvin	K	thermal energy (temperature)
	Liter	L	volume
	Celsius	°C	Temperature

A prefix may be added to SI units to make a multiple of the original unit. An SI prefix is a name or symbol that is put before a unit of measure (or its symbol) to form a decimal or a multiple of the unit. For example, *kilo* - is a multiple of a thousand and *milli* - is a multiple of a thousandth, so there are one thousand *millimeters* in a meter, and one thousand meters in a *kilometer* . All prefixes are multiples of 10, as you can see from the SI Prefixes Table below . The prefixes are never combined; a millionth of a kilogram is a *milligram* not a *microkilogram* .

Common Customary Measurements			
Length	**Weight**	**Time**	**Capacity**
1 foot = 12 inches	1 pound = 16 ounces	1 minute = 60 seconds	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 hour = 60 minutes	1 pint = 2 cups
1 yard = 3 feet		1 day = 24 hours	1 quart = 2 pints
1 mile = 5,280 feet		1 week = 7 days	1 quart = 4 cups
1 mile = 1,760 yards		1 year = 12 months	1 gallon = 4 quarts
		1 year = 365 days	1 gallon = 16 cups
		1 leap year = 366 days	

Metric Unit of Measure	
Measures of Length	
1 meter (m)	= 1000 millimeters (mm)
1 meter (m)	= 100 centimeters (cm)
1 Kilometer (km)	= 1000 meters
1 decimeter (dm)	= 1/10 meter
Measure of Weight	
1 gram (g)	= 1000 milligrams (mg)
1 kilogram (kg)	= 1000 grams
Liquid Measures	
1 liter (L)	= 1000 milliliters (mL)
~~1 deciliter (dL)~~	~~= 1/10 liter~~

1000 Liters (L) = 1 Kiloliter (kL)

Customary Rules

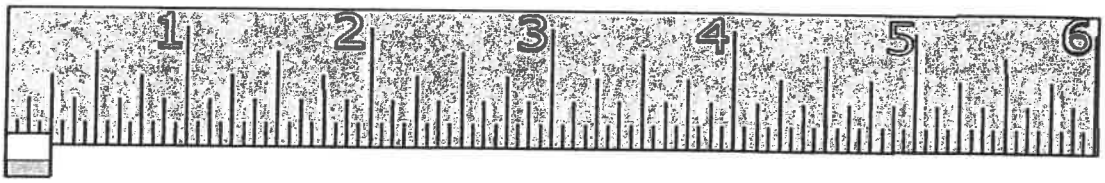
Ruler Reading 1/2 & 1/4

Name _____

Class _____

Place answers in the space provided.

1)_____



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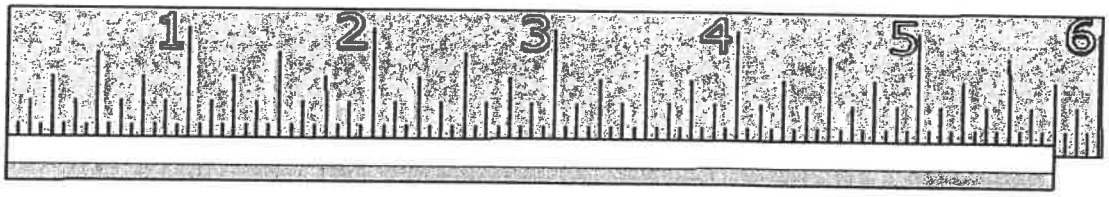

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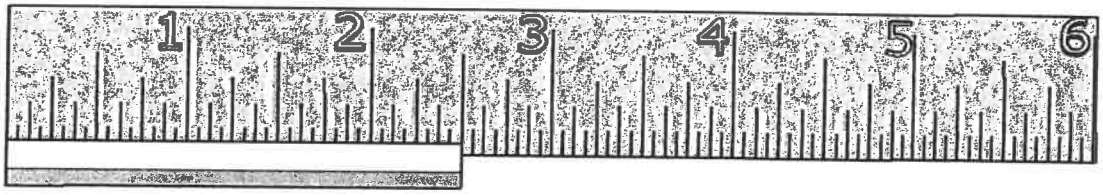

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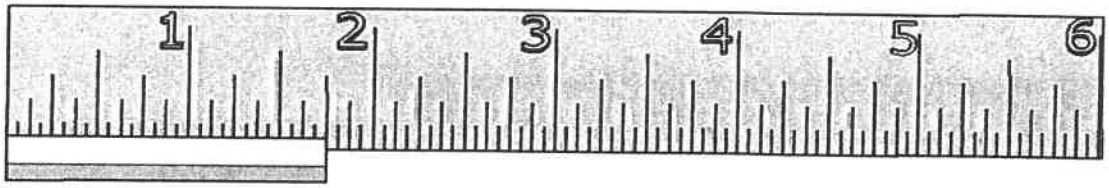

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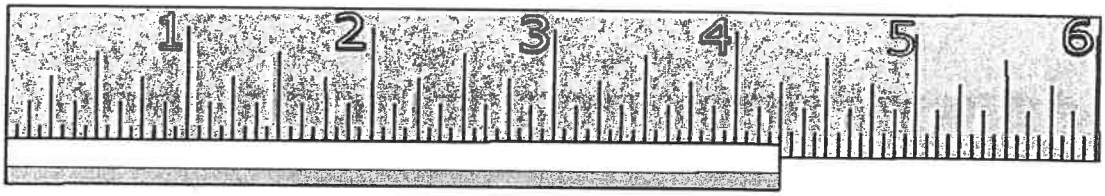

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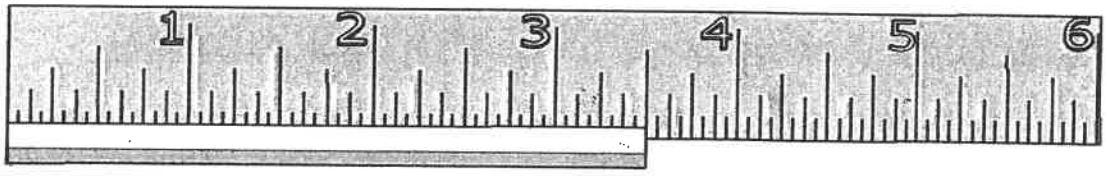

Number Right:	0	1	2	3	4	5	6
Score:	0	28	33	50	67	83	100

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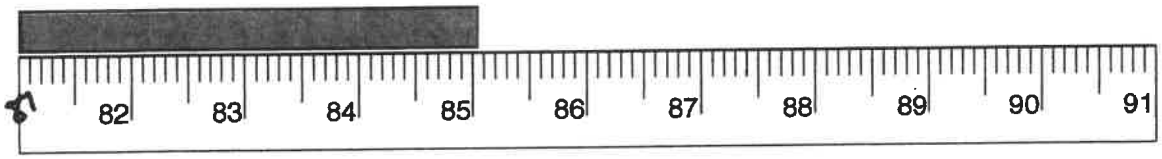
Name : _____ Score : _____

Teacher : _____ Date : _____

Reading a Metric Ruler

How many Centimeters ?



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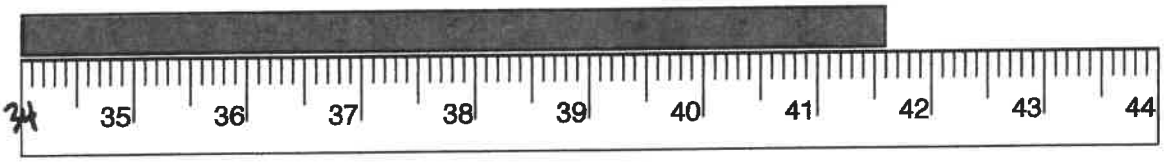

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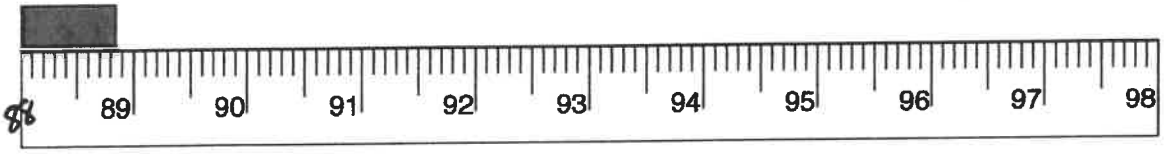

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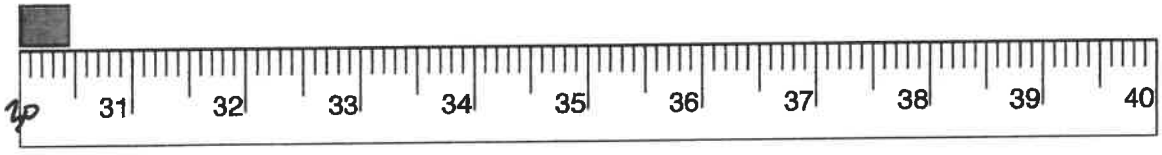

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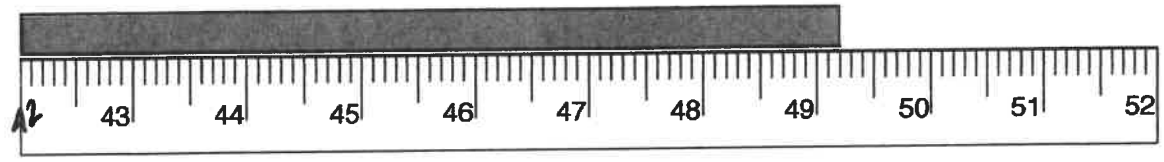

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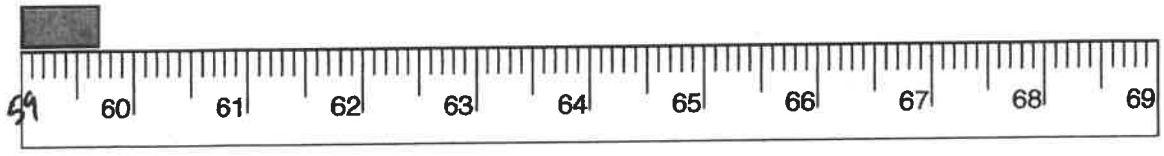

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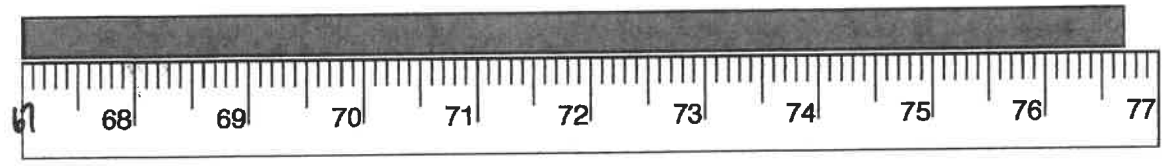

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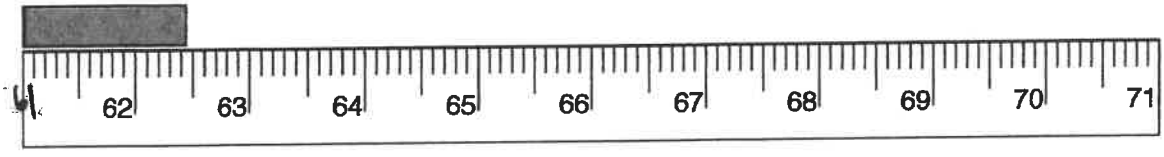
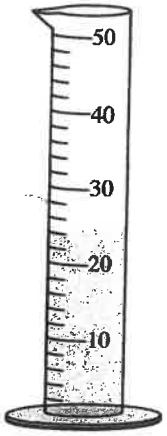


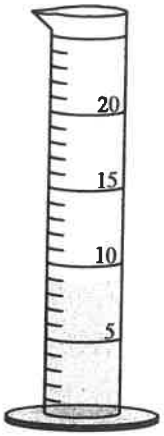
_____

Graduated Cylinders

Name:

Determine how much liquid is in each graduated cylinder.

1) 

2) 

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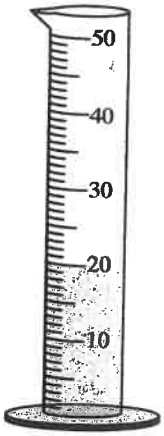
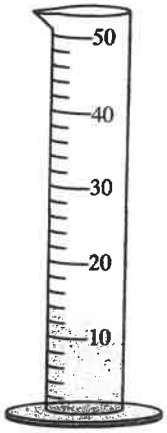
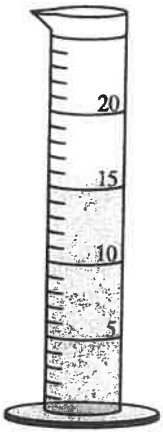
4) 

5) 

6) 

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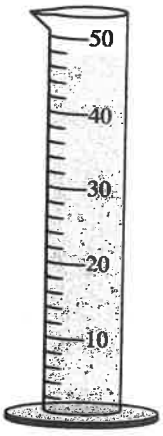
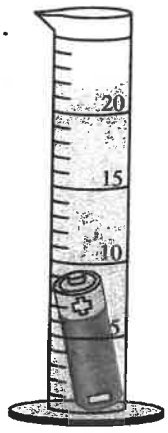
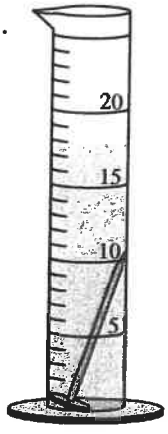
8) 

Four different objects were placed in a graduated cylinder 1 at a time:

Empty

A. 

battery

B. 

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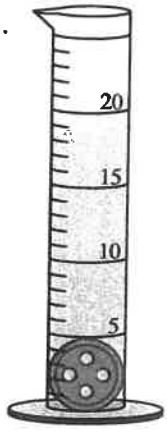
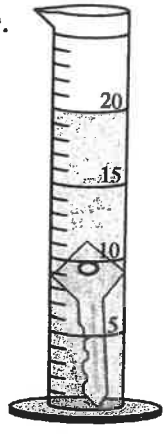
C. 

button

D. 

key

9) Which object had the greatest volume?

10) Which object had the least volume?

Answers

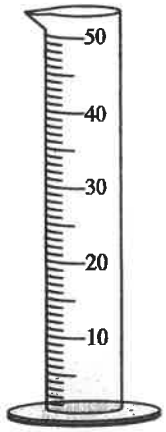
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

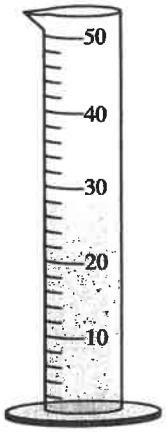
1-10	90	80	70	60	50	40	30	20	10	0

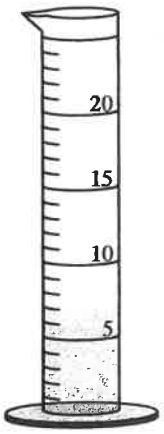
Graduated Cylinders

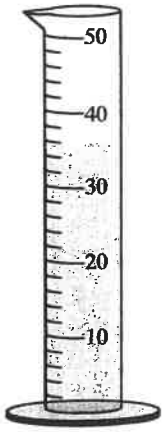
Name:

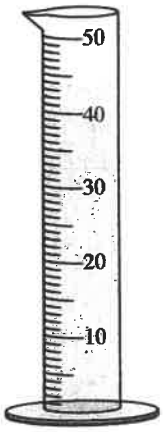
Determine how much liquid is in each graduated cylinder.

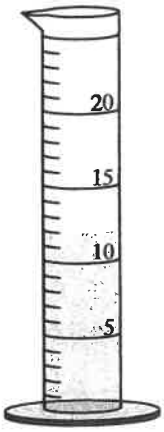
1) 

2) 

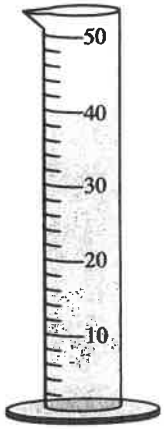
3) 

4) 

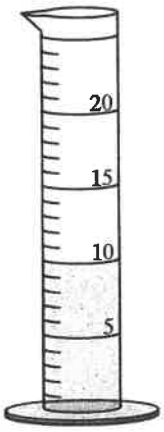
5) 

6) 

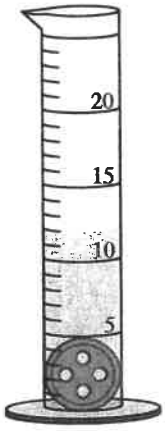
7) 

8) 

Four different objects were placed in a graduated cylinder 1 at a time:



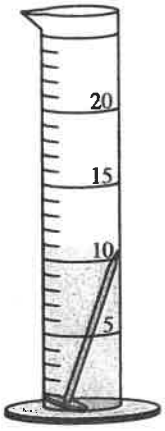
Empty

A. 

button

B. 

battery

C. 

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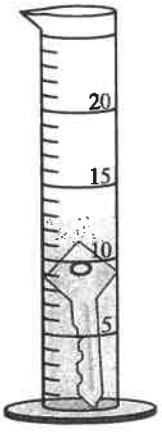
D. 

key

9) Which object had the greatest volume?

10) Which object had the least volume?

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

1. What is the standard unit for temperature in metric? _____

2. What is the standard unit for distance in metric? _____

3. What is the standard unit for mass/weight in metric? _____

4. What is the standard unit for volume of a liquid in metric? _____

5. What measurement has units which are universal? _____