Forensic Science Worksheet Metrics and Measurement Name _____

Per ____ Due Date _____

Scientists use the metric system of measurement, based on the number 10. It is important to be able to convert from one unit to the other.

Study the following chart...

kilo	hecto	deca	<u>Basic Unit</u>	deci	centi	Milli
(k)	(h)	(da)	gram (g)	(d)	(c)	(m)
1000	100	10	liter (L)	.1	.01	.001
10 ³	10 ²	10 ¹	meter (m)	10 ⁻¹	10-2	10 ⁻³

Using the chart above, you can determine how many places to move the decimal point and in what direction by counting the places from one unit to the other.

Example Convert 5 mL to L

To go from milli (m) to the base unit , liters, count on the above chart three places to the left. Hence, move the decimal point 3 places to the left and 5 mL becomes 0.005 L

Example Convert 12.4 kg to cg

To go from kilo (k) to the centi (c), count on the above chart five places to the right. Hence, move the decimal point 5 places to the right and 12.4 kg becomes 1240000 cg

Convert the following

- 1. $35 \text{ mL} = _____ dL$ 7. $25 \text{ cm} = ____ mm$

 2. $950 \text{ g} = ____k \text{g}$ 8. $0.005 \text{ kg} = ____ dag$

 3. $275 \text{ mm} = ____ cm$ 9. $0.075 \text{ m} = ____ cm$

 4. $1000 \text{ L} = ____ kL$ 10. $15 \text{ g} = ___ mg$

 5. $1000 \text{ mL} = ____ L$
- 6. 4500 mg = _____ g

Forensic Science Name _____ Worksheet Using Graduated Cylinders Per ____ Due Date _____

Directions: What does each of the graduated cylinders shown below read?

Forensic Science Worksheet Measuring Length Name _____

Per ____ Due Date _____

Directions: What lengths are marked on the centimeter ruler shown?



	cm	mm
A		
В		
С		
D		
Е		

Directions: Measure each of the following lines with a centimeter ruler. Record your answers on the lines at right.



Area of a Rectangle

The area of a rectangle is given by the formula where A = area, L = length, and W = width.

$$A = LW$$

Calculate the area of each of the following rectangles. Write your answer inside the rectangle.



Area of a Right Triangle

The area of a rectangle is given by the formula where A = area, b = base, and h = height.

 $A = \frac{1}{2}bh$

Calculate the area of each of the following right triangles. Write your answer inside the figure.



Volume of a Rectangular Solid

The volume of a rectangular solid is given by the formula where V = volume, L = length, W = width, and H = height.

$$V = LWH$$

Calculate the area of each of the following solids. Write your answer under each figure.



Forensic Science
Worksheet
Thermometers and Temperature Conversions

Name _____

Per _____ Due Date _____

Directions: Several thermometers are shown. Write the temperature shown in the box below each picture.



Directions: Convert the following temperatures as indicated. Show all of your work.

1. 55°C to °F

2. 101°F to °C

3. 22°C to Kelvin

4. O°C to °F

5. 0° F to $^{\circ}$ C

6. 0°C to Kelvin

~	10	20	30	40	50		70	~~~	~~~~	100
0	10	20	30	40	50	60	70	80	90	100
		—~—	~~				~~	~~		
0	100	200	300	400	500	600	700	800	900	1000
		mmm					mmm			mm
	1	1	1			1		1	1	
0	1	2	3	4	5	6	7	8	9	10

	· ·	~	~	\sim	\sim	\sim	~	~	~	~	~
	0	10	20	30	40	50	60	70	80	90	100
_	~~	—						~~			
	0	100	200	300	400	500	600	700	800	900	1000
	1111	mmm	mmm	miliuu	mm	ուսիսո	millini	I IIII	mmm	miliuu	шш
	0	1	2	3	4	5	6	7	8	9	10

0	10	20	30	40	50	60	70	80	90	100
0	100	200	300	400	500	600	700	800	900	1000
- 1111	 1	11111111 2	пп <mark>[рл</mark> з	h	11111111 5	6 1111111	11111111 7	8 8	ہ سالس	11111

								-		÷	
	0	10	20	30	40	50	60	70	80	90	100
_	~										
	0	100	200	300	400	500	600	700	800	900	1000
-	IIII	mmm		mmm			mmm	mmm	mmm	mmm	
	1			1	12	1.1	1	1	1	1	
	0	1	2	3	4	5	6	7	8	9	10

	0	100	200	300	400	500	600	700	800	900	1000
_	1000	mm	milm	hinnin	mmm	mmm	mmm	mini	mmm	mijim	mm
	0	1	2	3	4	5	6	7	8	9	10

60

70

80

90

100

What mass is shown on each of the following balances? Write your answer in the left margin.

40 50

Name _____ Forensic Science Worksheet Using Triple Beam Balances Per ____ Due Date _____

30

0

10

20

	10	20	30	40	50	60	70	80	an	100
Ŭ.	10	20	30	40		00	70	00	30	10
	~	~~					~~			~~
0	100	200	300	400	500	600	700	800	900	1000

<u> </u>			~	~		~		~		— ~
0	10	20	30	40	50	60	70	80	90	100
							~			
0	100	200	300	400	500	600	700	800	900	1000
	ппппп								ппппп	ШШ
	1	1	1				1	1	1	
0	1	2	3	4	5	6	7	8	9	10

	~		\sim							~
0	10	20	30	40	50	60	70	80	90	100
0	100	200	300	400	500	600	700	800	900	1000
ПШ	mini	miijimi	mmn	MITTI	mmm	mmm	mini	mmm	minin	min
0	1	2	3	4	5	6	7	8	9	10

0	10	20	30	40	50	60	70	80	90	100
<u> </u>						\sim	~	~		
0	100	200	300	400	500	600	700	800	900	1000
m	mm	ապա	Impin	mmm	mmm	miliuu	miliuu	miini	mm	mil
0	1	2	3	4	5	6	7	8	9	10

Ľ	0		10	20	30	40	50	60	70	80	90	100
-	0	-1	100	200	300	400	500	600	700	800	900	1000
-	7	ШП	mpm	miliuu	miliuu	mini	minin	mini	miliiii	mm	miliuu	min
	0		1	2	3	4	5	6	7	8	9	10