Physics 100
Unit 1: Physics Basics
Notes: Metric Measuring, Part 1

Name: _____Answers_____

Metric Base units: Name the basic metric units for each of the following...

1. Volume (size) : __Liter__

2. Mass (amount of matter in something): __kilogram__

3. Weight (how heavy something is; a measure of gravitational attraction) : __Newton__

4. Length : __Meter__

Metric Estimation: Provide the correct metric unit for each of the following.

Answer Choices:
mm (millimeter), cm (centimeter), L (liter), mL (milliliter), N (Newton), kg (kilogram), g (gram), m (meter), km (kilometer)

5. The width of a pinky fingernail = 1 __cm__

6. The length of a long step = 1 __m__

7. The mass of a standard Nalgene bottle full of water = 1 __kg.__

8. The mass of a paper clip = 1 __g__

9. The volume of a chocolate chip = 1 __mL__ — mL

10. The volume of a standard Nalgene water bottle = 1 __L__

11. The thickness of a dime = 1 __mm__

12. The weight of an uncooked burger patty = 1 __N__

13. Half of a mile is a little bit less than 1 __km__ $1 km ≈ 0.6$ mile

Metric Ratios: Enter numbers that give the correct ratios

14. __1__ m = __100__ cm

15. __1000__ mm = __100__ cm = __1__ m

16. __1000__ m = __1__ km

$kilo = 1000$

$centi = \frac{1}{1000}$

$milli = \frac{1}{1000}$

1

Practice: Metric Measuring, Part 1

Each of the items below is approximately equal to 1 metric unit. Write the name of the unit and what that unit measures. For some items, there is more than one answer.

1kg (mass)
1L (volume)

meter (length)

1cm (length)

mm (length)

1N (weight)

1g (mass)

mL (volume)
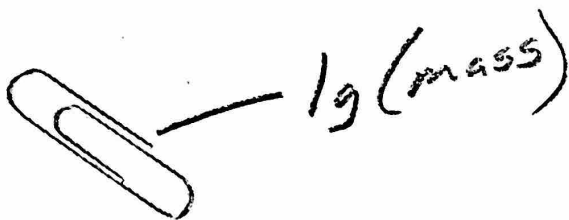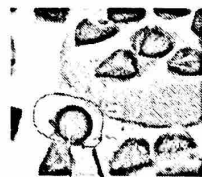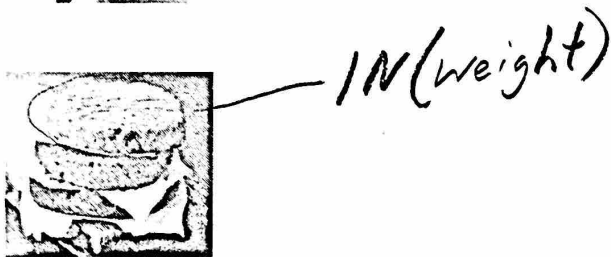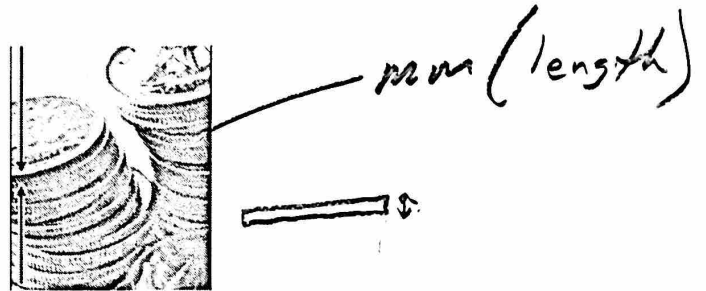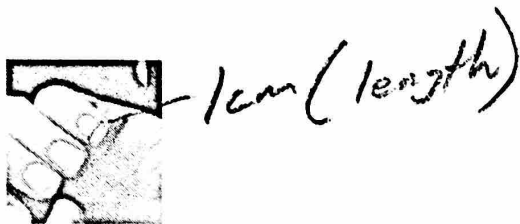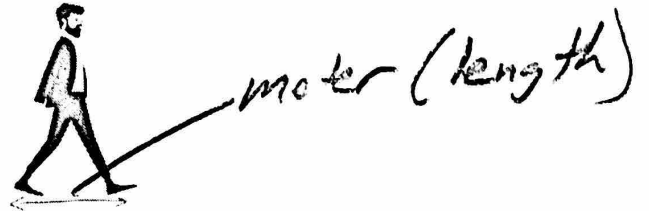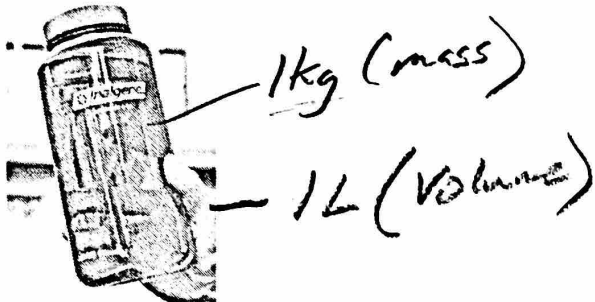
1cm across
1 gram

Measuring in cm and mm:

1. Measure the line on the right and record the length in cm and mm.

    Length = _9.5_ cm = _95_ mm

2. Measure the line below, and record the length in cm and mm.

    Length = _15.9_ cm = _159_ mm