

Metric Treasure Hunt

Name _____ Period _____

Experimental:

1. Find something that is about one meter long, wide or tall.
2. Find something that is about one centimeter long, wide or tall.
3. Find something that is about one millimeter long, wide or tall.
4. Find someone who is 1.7 meters tall.
5. Find something with a mass of about 5 kilograms.
6. Convert your height to meters and then measure your height in meters.
7. Convert your mass (öweightö) to kilograms and then measure your mass in kilograms.

Worksheet:

1. A football field is 100 yards long. Is that more or less than 100 meters? Explain your reasoning!
2. Is öcentipedeö an appropriate name for an insect with lots of legs? Explain.
3. True or false: A millisecond is about 17 minutes. Defend your answer.
4. The weight of a one-kilogram object is about 2.2 pounds. Would ten pounds of potatoes be closer to 22 kg or 4.5 kg? Explain.
5. A kilometer is 0.6 mile. If you were arrested for going 55 mile/hour in a 90 km/hr zone, and the fine was \$50 for each 5 miles/hour over the speed limit, what (if any) would be your fine? Explain.
6. Verify (show work) $1 \text{ hour} = 3.6 \times 10^3 \text{ seconds}$.
7. 1 year is approximately $1 \times 10^7 \text{ seconds}$.

Here are several metric prefixes you may encounter in physics. You will need them for the rest of the assignment.

Prefix	Symbol	Factor	In Words
Tera	T	10^{12}	A million million
Giga	G	10^9	A billion
Mega	M	10^6	A million
Kilo	k	10^3	A thousand
Hecto	h	10^2	A hundred
Deka	da	10^1	Ten
-	-	-	-
Deci	d	10^{-1}	
Centi-	c	10^{-2}	
Milli	m	10^{-3}	A thousandth
Micro	μ	10^{-6}	A millionth
Nano	n	10^{-9}	A billionth
Pico	p	10^{-12}	A trillionth
Femto	f	10^{-15}	
Atto		10^{-18}	

Physics Humor(?)

1. What do you think is worth a megabuck? What do you call a 10^{-9} goat?
2. 10^{-1} niium
3. 10^{-1} tant
4. 25×10^{-2} piece
5. 2×10^2 with it
6. 10^{12} dactyl
7. 10^1 dent
8. 2×10^3 mockingbird
9. 10^{-1} tarie
10. 10^{-2} nel
11. 10^3 monjaro
12. 10^{-6} fish
13. 10^{-6} scope
14. 10^{-6} phones
15. 10^9 ling
16. 10^{-6} manager
17. 10^{-3} grade
18. 10^6 phones
19. 10^{-12} boo
20. 10^{-18} boy
21. 10^{-2} mental
22. 10^1 cards
23. These are 10^{12} bull