

Name: ANSWERS

Date: \_\_\_\_\_

Section      C      D      F

## Intro 1: Intro to Physics

### I. Significant Figures

1. How many significant figures are in the following measurements?

- |                    |          |
|--------------------|----------|
| i. 330,000,000 m/s | <u>2</u> |
| ii. 22.22 °C       | <u>4</u> |
| iii. 0.0276 °C     | <u>3</u> |
| iv. .004 J         | <u>1</u> |
| v. .5050 MHz       | <u>4</u> |
| vi. 3.008 s        | <u>4</u> |
| vii. 0.0002 mm     | <u>1</u> |

### II. Units

1. Fill in the chart below for the prefixes:

| <u>Power</u> | <u>Prefix</u> | <u>Abbreviation (meters)</u> | <u>Relation (your own explanation)</u> |
|--------------|---------------|------------------------------|----------------------------------------|
| $10^{12}$    | terra         | Tm                           | _____                                  |
| $10^9$       | giga          | Gm                           | _____                                  |
| $10^6$       | mega          | Mm                           | _____                                  |
| $10^3$       | kilo          | km                           | _____                                  |
| $10^0$       | (none)        | m                            | _____                                  |
| $10^{-2}$    | centi         | cm                           | _____                                  |
| $10^{-3}$    | milli         | mm                           | _____                                  |
| $10^{-6}$    | micro         | $\mu\text{m}$                | _____                                  |
| $10^{-9}$    | nano          | nm                           | _____                                  |

### III. Prefixes

1. Convert each of the following to the units shown:

i. 1 millimeter expressed in meters \_\_\_\_\_**.001**\_\_\_\_\_ m

ii. 17 grams expressed in micro grams \_\_\_\_\_**17,000,000**\_\_\_\_\_  $\mu\text{g}$

iii. .65 kilometers expressed in centimeters \_\_\_\_\_**65,000**\_\_\_\_\_ cm

iv. .5 milligrams expressed in grams \_\_\_\_\_**.0005**\_\_\_\_\_ g

v. 468 micrometers expressed in centimeters \_\_\_\_\_**.0468**\_\_\_\_\_ cm

vi. 2 hours 10 minutes expressed in seconds \_\_\_\_\_**7,800**\_\_\_\_\_ s