

Name \_\_\_\_\_

Period \_\_\_\_\_

## Assignment – Dimensional Analysis

### Conversions (for your convenience)

1 hour = 60 minutes

1 mile = 5280 feet

1 yard = 3 feet

1 meter = 3.28 feet

1 km = 0.62 miles

1 light second = 300,000,000 meters

1 kg = 2.2 lbs

1 lb = 0.45 kg

1 quart = 0.946 liters

1 m/s = 2.2 miles/hour

1 foot = 12 inches

1 gallon = 3.78541 liters

1000 m = 1 kilometer

1000 mm = 1 meter

1 inch = 2.54 cm = 25.4 mm

10 mm = 1 centimeter

1 minute = 60 seconds

100 cm = 1 meter

**Convert the following quantities using Dimensional Analysis and showing ALL of your work including the units.**

1. 565,900 seconds = \_\_\_\_\_ days

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2. 43 miles = \_\_\_\_\_ feet

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3. 165 lbs = \_\_\_\_\_ kg

Solve the following (show all of your work)

4.  $60 \frac{\text{miles}}{\text{hour}} = \frac{\text{meters}}{\text{second}}$

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5.  $88 \frac{\text{inches}}{\text{second}} = \frac{\text{miles}}{\text{day}}$

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6.  $150 \frac{\text{gallons}}{\text{day}} = \frac{\text{gallons}}{\text{year}}$