Name: $\qquad$
HW \#1: Dimensional Analysis


Convert these units.

| Length | Weight | Volume | Time |
| :--- | :--- | :--- | :--- |
| 12 inches $=1$ foot | 16 ounces $=1$ <br> pound | 2 cups = 1 pint | 60 seconds $=1$ minute |
| 3 feet $=1$ yard | 2000 pounds $=1$ ton | 2 pints $=1$ quart | 60 minutes $=1$ hour |
| 5,280 feet $=1$ mile |  | 4 quarts $=1$ gallon | 24 hours $=1$ day |
| 1,760 yard $=1$ mile |  |  | 7 days $=1$ week |
|  |  |  | 52 weeks $=1$ year |

1) $3000 \mathrm{mg}=$ $\qquad$ 2) $105 \mathrm{~km}=$ $\qquad$ m
2) $500 \mathrm{~cm}=$ $\qquad$ m
3) $7,500 \mathrm{lb}=$ $\qquad$ T
4) 6 days $=$ $\qquad$ hr
5) 20 cups $=$ $\qquad$ gal
6) Tom needs to build a fence on his property that is 1.5 miles long. Fencing is sold at Lowes by the foot. How many feet of fencing will Tom need to purchase to build his fence?
7) I found a snake in my garden that was 0.125 hm long. How long is this snake in cm ?
$\qquad$
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8) I have 5 quarts of yogurt in my refrigerator and want to serve it by the cup. How many servings of yogurt will I have?
9) I kept my running time on my watch for the entire summer vacation. At the end of the summer I had logged 60,480 minutes. How many weeks of running would this be?
10) If I have lived in my house for 5,110 days and my neighbor has lived in his house for 15 years, who has lived in their house longer?

Prove your answer:
12) My car requires tires that are no more than 36 cm wide. A tire store has tires on sale that are 0.2 m wide. Should I purchase these tires for my car?

Prove your answer:

