## Name:

## Geometry: Problem Set 1

## Directions:

Solve the following problems. Write your solutions and explanations on your own paper. You may transfer your answers and work to the fillable pdf worksheet and upload to canvas along with any pictures of your work that you would like to include.

1. The distance from New York City to Los Angeles is 4090 kilometers.
a. [ $\mathbf{3} \mathbf{~ p t s}$ ]What is the distance in miles? (You must use unit fractions. Round to the nearest mile and be sure to include units.)

|  | X |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | $=$ |  |  |  |

b. [ $3 \mathbf{p t s}$ ]If your car averages 31 miles per gallon, how many gallons of gas can you expect to use driving from New York to Los Angeles? (You must use unit fractions. Round to one decimal place and be sure to include units.)

| X | $=$ | $=$ |  |
| :---: | :---: | :---: | :---: |

2. [4 pts] The pediatric dosing of acetaminophen is 10 mg per kg of body weight. What dosage should a 32 lb child receive? ( $1 \mathrm{~kg}=2.2 \mathrm{lbs}$ ) (You must use unit fractions. Round to 1 decimal place and be sure to include units.)

3. [4 pts] A Grand Prix Formula 1 race consists of 61 laps around a 5.067 km long track. At 225 miles per hour, how long will it take to go around once? (You must use unit fractions. Round to 3 decimal places and be sure to include units.)

| X | X | $=$ | $=$ | $=$ |
| :---: | :---: | :---: | :---: | :---: |

4. The Wallow Fire of 2011 burned 538,000 acres in eastern Arizona.
a. [ $\mathbf{3} \mathbf{~ p t s}$ ] If one square mile is 640 acres, how many square miles did the fire burn? (You must use unit fractions. Round to 1 decimal place and be sure to include units.)

|  | X |  |  | $=$ |  | $=$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |

b. [ $\mathbf{3} \mathbf{~ p t s}]$ The city of Tempe is about 50 square miles in size. How many Tempes would this fire have burned? (You must use unit fractions. Round to 1 decimalplace.)


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    > Milli - 1000 of these in 1 base unit
    > Centi - 100 of these in 1 base unit Deci- 10 of these in 1 base unit Base Unit
    > Deka- 10 base units in one of these
    > Hecto - 100 base units in one of these
    > Kilo - 1000 base units in one of these

