

# **PART 1 – CONVERSIONS IN THE SAME SYSTEMS**

Solve the following problems using the table below. Please show any work.

CAPACITY AND VOLUME	
METRIC	U.S. CUSTOMARY
1 liter = 1000 milliliters	1 gallon = 4 quarts
<del>1000</del> 2000	1 quart = 2 pints
	1 pint = 2 cups

1. Lila went to the store to buy three 2-liter bottles of pop for a party. The store only sold the pop she wanted in 500 mL bottles. How many bottles does she need to buy?

12000

1500 mL

2. Micah bought 3 gallons of apple cider for the same party. How many cups of cider will he be able to serve?

48 cups

$$\begin{aligned}
 4 \times 3 &= 12 \\
 12 \times 2 &= 24 \\
 24 \times 2 &= \underline{48 \text{ cups}}
 \end{aligned}$$

## PART 2 – CONVERSIONS BETWEEN SYSTEMS

Solve the following problems using the table below. Please show any work.

LENGTH	
METRIC TO CUSTOMARY	U.S. CUSTOMARY TO METRIC
1 centimeter 0.39 inch	1 inch = 2.54 centimeters
1 kilometer 0.62 mile	1 mile 1.61 kilometers

1. Eshaan is driving in Canada and the speed limit signs are in kilometers per hour. If the sign says 60 kilometers per hour, what is the approximate speed in miles per hour?

$$\begin{array}{r} 0.62 \\ \times 60 \\ \hline 37.2 \end{array}$$

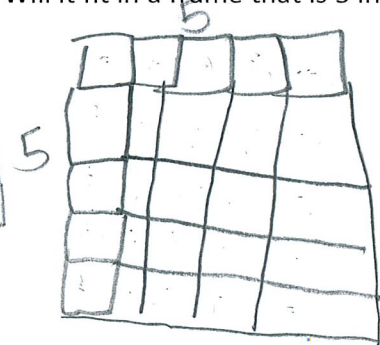
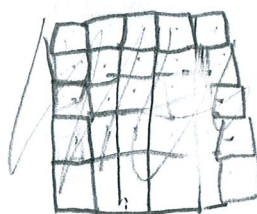
$$\begin{array}{r} 37.2 \\ \times 1.61 \\ \hline 59.892 \end{array}$$

59 mph

2. Maya measured the side of a square postcard as 12 cm. Will it fit in a frame that is 5 in by 5 in? Why or why not?

$$\begin{array}{r} 0.39 \\ \times 12 \\ \hline 4.68 \end{array}$$

$$\begin{array}{r} 2.54 \\ \times 4.68 \\ \hline 11.8872 \end{array}$$



25 boxes

yes

yes and no, it would fit but it would be too small

**PART 3 – MULTI-STEP PROBLEM**

Solve the following problem. Please show any work.

US. CUSTOMARY	
TIME	LENGTH
1 minute = 60 seconds	1 mile = 5,280 feet

Hannah is trying out for the cross country team at her school. To make the team, she has to complete a mile in 8 minutes or less. Today she ran 9 feet per second. Based on today, would she make the team?

☒ Yes

☐ No

If No, how much faster (in feet per second) does she need to be in order to make the team?