

# Metric Mayhem

Student Sheet(s)

## Materials

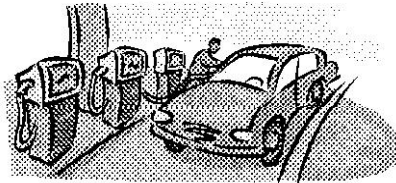
- Calculator
- Scrap paper

## Procedure

You and your friends are taking a trip. Answer the following problems about your journey. Check the table below for conversion factors. Use scrap paper if necessary.

Conversion Factors
1 inch (in) = 2.54 centimeters (cm)
1 mile (mi) = 1.6 kilometers (km)
1 liter (l) = .264 gallons (g)
1 fluid ounce (oz) = 29.57 milliliters (ml)
1 pound (lb) = .45 kilograms (kg)
1 gallon (g) = 3.79 liters (l)
1 short ton (2,000 lbs) = 907.2 kilograms (kg)
1 meter (m) = 3.28 feet (ft)
1 mile (mi) = 5,280 feet (ft)

1. Your car uses the metric system, but the gasoline pump you are at uses U.S. measurements. If your car's gas tank holds 57,700 milliliters, how many gallons of fuel will you need to pump?



$$57,700 \text{ mL} \times \left( \frac{1 \cancel{\text{L}}}{1000 \text{ mL}} \right) \left( \frac{1 \text{ Gal}}{3.79 \cancel{\text{L}}} \right) = \frac{(57,700 \times 1 \times 1)}{(1000 \times 3.79)} = \frac{57,700}{3790}$$

*not given*

$$= 15.2 \text{ Gal}$$

2. The speed limit is 343,200 feet per hour. How fast can you drive in kilometers per hour?

$$343,200 \frac{\text{ft}}{\text{hr}} \left( \frac{1 \text{ mile}}{5280 \text{ ft}} \right) \left( \frac{1.6 \text{ km}}{1 \text{ mile}} \right) = \frac{(343,200 \times 1 \times 1.6)}{(5280 \times 1)}$$

$$\frac{549120}{5280} = 104 \frac{\text{km}}{\text{hr}}$$

