Worksheet 1-3: Unit Rates- Comparisons

1. Find the unit rate for each situation.
   a) driving 180 km in 3 hours
   b) 54 hot dogs for 18 people
   c) 160 words typed in 4 minutes
   d) $27.40 for 4 hours of work
   e) $12.66 for 8 packages of juice boxes
   f) $284 for a 4 day car rental
   g) 560 heartbeats in 6.5 minutes
   h) jogging 3.5 km in 30 minutes
   i) a convenience store has 15 customers in 20 minutes
   j) the temperature changes by -16ºC in 4 hours

2. A student worked 5 days/week and 8 h/day. He earned $300/week. What was his hourly rate of pay?

3. The gas consumption in vehicles is reported in litres per 100 km (L/100km).
   a) Car A has an average consumption of 17.2 L/100 km. Car B has an average consumption of 15.2 L/100 km. Which car is more energy efficient?
   b) Complete this table. Round each answer to the nearest tenth of a litre per 100 km.

<table>
<thead>
<tr>
<th>Car</th>
<th>Distance Driven (km)</th>
<th>Gas Used (L)</th>
<th>Gas Consumption (L/100km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>750</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>1240</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>565</td>
<td>27.5</td>
<td></td>
</tr>
</tbody>
</table>

c) Which car was most efficient? Which was least efficient?
4. A television ad claims that 4 L of paint will cover 40 m². How much paint is needed to cover 70 m²?

5. Each of your finger nails grows at about 0.05 cm/week. Each of your toenails grows at about 0.65 cm/year. Do your toenails or finger nails grow faster?

6. Decide which is the better value based on the unit prices.
   a) $25.00 for concert tickets for 2 people or $36.00 for concert tickets for 3 people.
   b) $380 for a bus for 32 people or $420 for a bus for 38 people.
   c) $4.25 for 4 L of milk or $2.55 for 2 L of milk.
   d) 35 g of mixed nuts for $0.99 or 50 g of mixed nuts for $1.49.
   e) inline skate rentals at $30.00 for 4 hours or $54.00 for 7 hours.
   f) 1 L of pop for $0.90 or a case of 24 cans of 355 mL of pop for $4.25.
   g) 500 sheets of paper for $9.45 or 4500 sheets of paper for $49.00.
   h) 25 L of gas for $21.50 or 35 L of gas for $40.00.