Equipment Room

Coach's Corner Solutions

Unit 5: Proportional Reasoning Lesson 5.1

Coach's Corner – I

1. At a federal government meeting, there were 40 Conservative MPs (Members of Parliament), 12 Bloc-Québecois MPs, 5 Green Party MPs, 25 NDP MPs, and 18 Liberal MPs. Write each ratio as a fraction in lowest terms.

   a. Bloc-Québecois MPs to Conservative MPs

   $12:40$

   $$\frac{12}{40} = \frac{12(\div 4)}{40(\div 4)} = \frac{3}{10}$$

   b. Green Party MPs to NDP MPs

   $5:25$

   $$\frac{5}{25} = \frac{5(\div 5)}{25(\div 5)} = \frac{1}{5}$$

   c. Liberal and Bloc-Québecois MPs to Conservative MPs

   $30:40$

   $$\frac{30}{40} = \frac{30(\div 10)}{40(\div 10)} = \frac{3}{4}$$

2. If Nolan earns \$67.50 for 6 hours of work, what is Nolan's hourly rate of pay?

   $$\frac{\$67.50}{6 \text{ hours}} = \frac{\$11.25}{1 \text{ h}}$$

   Nolan earns \$11.25/h.

3. Mr. Nick drove 628 km using 44 litres of gasoline. What was his rate of kilometres driven per litre of fuel consumed?

$$\frac{628 \text{ km}}{44 \text{ litres}} \doteq \frac{14.27 \text{ km}}{1 \text{ litre}}$$

Mr. Nick was able to travel 14.27 km/L.

4. Shine-a-Lot toothpaste commercials claim that 5 out of 6 people prefer it. If this is true, how many people out of 300 would prefer Shine-a-Lot?

$$\frac{5}{6} = \frac{n}{300}$$
$$5 \cdot 300 = 6n$$
$$\frac{1500}{6} = \frac{6}{6}n$$
$$250 = n$$

250 people out of 300 prefer Shine-a-Lot toothpaste.

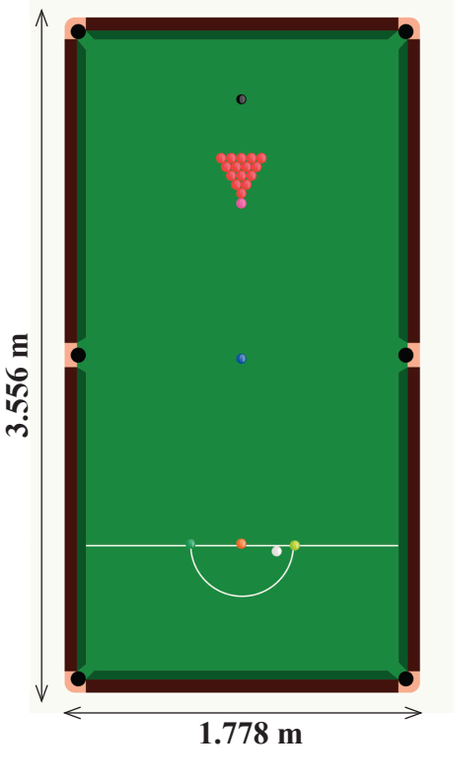
5. The following picture shows a drawing of a snooker pool table. What are the dimensions of the table, in feet, if 1 metre = 3.28084 feet?

Let l be the length and let w be the width of the table.

$$\frac{3.556 \text{ m}}{l} = \frac{1 \text{ m}}{3.28084 \text{ ft}}$$
$$3.556 \text{ m} \cdot 3.28084 \text{ ft} = 1 \text{ m} \cdot l$$
$$11.67 \text{ ft} \doteq l$$

$$\frac{1.778 \text{ m}}{w} = \frac{1 \text{ m}}{3.28084 \text{ ft}}$$
$$1.778 \text{ m} \cdot 3.28084 \text{ ft} = 1 \text{ m} \cdot w$$
$$5.83 \text{ ft} \doteq w$$

The dimensions of the snooker table are 11.67 feet by 5.83 feet.



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