

Solve each problem below using your knowledge of decimals.

1. About how far can you travel on 9.6 liters of gas if your car gets 31.2 kilometers per liter?

Estimates will vary: $9.6 \times 31.2 \rightarrow 10 \times 30 = 300$

About 300 kilometers

2. If residential heating oil costs \$1.73 per gallon and the oil tank in your home holds 275 gallons, then how much will you pay to fill your tank?

$\$1.73 \times 275 = \475.75

3. Sheila studied for 2.7 hours every day for 4.5 days. How many hours did she study?

$2.7 \times 4.5 = 12.15$ hours

4. Aaron multiplied 6.9 by 4.1 and found a product of 2.829. Use estimation to determine whether his answer is reasonable or unreasonable. Explain your answer.

Aaron's product of 2.829 is unreasonable since 7×4 equal 28.

5. A factory worker earns \$9.48 per hour. If he earned \$417.12 last week, then about how many hours did he work?

Estimates will vary: $9.48 \overline{) \$417.12} \rightarrow 10 \overline{) \$410}^{\text{41}}$

About 41 hours

6. David has 15.9 lbs. of coffee. If he puts the coffee into 6 bags, then how much coffee will each bag contain?

$$\begin{array}{r} 2.65 \\ 6 \overline{) 15.9} \end{array}$$

2.65 lbs. in each bag

7. Rosa earned \$322.47 for 7.6 hours of work. How much money did she earn for 1 hour of work? Round your answer to the nearest cent.

$$\begin{array}{r} \$42.430 \\ 7.6 \overline{) \$322.470} \end{array}$$

Rounded to the nearest cent, Rosa earned \$42.43 for 1 hour of work

8. Three students divided 63.96 by 7.8 and arrived at different answers. Their quotients were 0.82, 82.0, and 8.2. Use estimation to determine which quotient is reasonable. Explain your answer.

$$7.8 \overline{) 63.96} \rightarrow 8 \overline{) 64}^{\text{8}}$$

Based on an estimate of 8, the quotient of 8.2 is reasonable.