

1. a) 3250 b) 0.0242
2. a) Commutative or Associative
b) Associative
c) Distributive
d) Associative
3. a) $1\frac{1}{2}$ b) $\frac{2}{3}$
4. a) 45 b) 110
5. 111°C

Formative (homework)
Can fix errors and return
for full credit.

Summative *80% of grade*
Fill out quiz retake form.
Quiz

According to the sample label above, one serving of Cheesy Mac macaroni and cheese contains 15% of the recommended daily amount of saturated fat that a person should eat. Nutritionists recommend that a person should have no more than a certain amount of saturated fat each day. One serving of Cheesy Mac has 3 grams (3g) of saturated fat. How many grams of saturated fat should a person eat in one day?

Your Task: With your team, determine how many grams of saturated fat a person should eat each day. Look for more than one way to solve the problem and be ready to explain your reasoning.

How many grams of saturated fat should a person eat in one day? ^{21g}

$$\frac{3g}{15\% DV} \cdot \left[\frac{3}{3} \right] = \frac{1g}{5\% DV}$$

$$\frac{1g}{5\% DV} \cdot \left[\frac{20}{20} \right] = \frac{20g}{100\% DV}$$

or

$$\frac{3g}{15\% DV} = \frac{?g}{100\% DV}$$

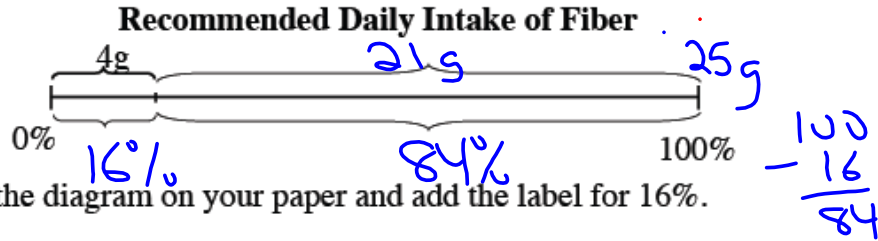
$$15 \overline{) 100} \begin{array}{r} 6 \\ 90 \\ \hline 10 \end{array} \frac{10}{15} \approx 6\frac{2}{3}$$

$$\frac{3g}{15\% DV} \cdot \left[\frac{6\frac{2}{3}}{6\frac{2}{3}} \right] = \frac{20g}{100\% DV}$$

$$3 \cdot \frac{20}{3} = 20$$

Nutrition Facts	
Serving Size 1 cup (228g)	
Serving Per Container 4	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

- 5-4. One granola bar contains 4g of dietary fiber. The label says that 4g is 16% of the daily recommended amount. Louis decided to draw a diagram like the one below to understand this situation.



- Copy the diagram on your paper and add the label for 16%.
- How many grams of fiber are recommended each day? How can you show this with equal ratios? $\frac{4g}{16\%} = \frac{1g}{4\%}$ $\frac{1g}{4\%} \cdot \frac{21}{21} = \frac{21g}{84\%}$
- What percent of fiber should Louis get from other foods? Why is this percent equivalent to the ratio $\frac{21g}{25g}$? $\frac{21}{25} \cdot \frac{4}{4} = \frac{84}{100} = 84\%$
- What other amounts are missing on the diagram? Add labels for all parts, percents, and the whole. See Above
- Chris is eating cookies that contain 12g of dietary fiber, which he says is 48% of the recommended daily amount. How can you use ratios and part (b) above to check that 12g is equivalent to 48%?

$$\frac{4g}{16\%} \cdot \frac{3}{3} = \frac{12g}{48\%} \quad \text{or} \quad \frac{1g}{4\%} \cdot \frac{12}{12} = \frac{12g}{48\%} \text{ DV}$$

Ratio

$$\frac{12g}{48\%} = \frac{4g}{16\%} \cdot \frac{3}{3}$$

Yes, he's correct.