Lesson 5.1
Problem Solving

Use the table to solve 14–16.

14. If each muffin contains the same amount of cornmeal, how many kilograms of cornmeal are in each corn muffin?

\[ \frac{150}{1000} = 0.150 \text{ kg} \]

15. If each muffin contains the same amount of sugar, how many kilograms of sugar, to the nearest thousandth, are in each corn muffin?

\[ \frac{66.7}{1000} = 0.067 \text{ kg} \]

16. The bakery decides to make only 100 corn muffins on Tuesday. How many kilograms of sugar will be needed?

\[ 66.7 \div 10 = 6.67 \text{ kg} \]

17. Explain how you know that the quotient 47.3 \div 10^1 is equal to the product 47.3 \times 0.1.

Since 10 is equal to \( \div 10 \) and 10^1 = 10 \( \text{ and } 0.1 = \frac{1}{10} \)

18. Ella used 37.2 pounds of apples to make applesauce. She used one tenth as many pounds of sugar as pounds of apples. How many pounds of sugar did Ella use?

A. 372 pounds
B. 3.72 pounds
C. 0.372 pound
D. 0.0372 pound

\[ S = \frac{a}{10} \]

\[ 37.2 \div 10 = 3.72 \]
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Lesson 5.2

What's the Error?

12. Aida is making banners from a roll of paper that is 4.05 meters long. She will cut the paper into 3 equal lengths. How long will each banner be?

\[
4.05 \div 3
\]

Look how Aida solved the problem.
Find the error.

\[
1.05
\]

Solve the problem and correct the error.

\[
\begin{array}{c}
\times \\
\times \\
\times \\
\times \\
\times \\
\end{array}
\]

\[
1.35
\]

So, Aida said that each banner would be 1.05 meters long,
but each banner should be 1.35 meters long.

- Describe Aida’s error. She exchanged 1 flat for 10 cubes instead of 10 sticks. She skipped tenths and went straight to hundredths.

- What if the roll of paper were 4.35 meters long? How long would each banner be?

Each banner = 1.45 meters long
Lesson 5.3

Problem Solving

Use the table to solve 18-20.

18. Estimate the average daily snowfall for Alaska’s greatest 7-day snowfall.
   \[186.9 \div 7 = 210 \div 7 = 30 \text{ in.}\]

19. How does the estimate of the average daily snowfall for Wyoming’s greatest 7-day snowfall compare to the estimate of the average daily snowfall for South Dakota’s greatest 7-day snowfall?
   \[84.5 \div 7 = 70 \div 7 = 10 \text{ in.}\]
   \[112.7 \div 7 = 140 \div 7 = 20 \text{ in.}\]

20. The greatest monthly snowfall in total in Alaska is 297.9 inches. This happened in February, 1953. Compare the daily average snowfall for February, 1953, with the average daily snowfall for Alaska’s greatest 7-day snowfall. Use estimation.
   \[297.9 \div 28 = 30 \div 30 = 10 \text{ in.}\]

21. Write Math
   What’s the Error? During a 3-hour storm, it snowed 2.5 inches. Jacob said that it snowed an average of about 8 inches per hour.
   \[0.5 = \frac{25}{10} \div 3 \div 3 = 8 \text{ tenths}\]
   Jacob forgot he was dividing tenths, so his answer needed to be tenths.

22. Test Prep
   A plant grew 23.8 inches over 8 weeks. Which is the best estimate of the average number of inches the plant grew each week?
   \[23.8 \div 8 = 24 \div 8 = 3\]
   \[8, 16, 24, 32, 40\]

Greatest 7-day snowfall is 3 times 1953.

South Dakota is 2 times greater than Wyoming.
21. The standard width of 8 lanes in swimming pools used for competitions is 21.02 meters. The standard width of 9 lanes is 21.06 meters. How much wider is each lane when there are 8 lanes than when there are 9 lanes?

- 0.30 meter
- 2.44 meters
- 2.28 meters

d. Complete the sentences.

Each lane is _2.44_ meters wide when there are 8 lanes.

Each lane is _2.74_ meters wide when there are 9 lanes.

Since _2.74 - 2.44 = 0.30_, the lanes are _0.30_ meter(s) wider when there are 8 lanes than when there are 9 lanes.

22. Robert pays $32.04 for 6 student tickets to the basketball game. What is the cost of each student ticket?

- $19.04
- $26.04
- $5.34

23. Jasmine uses 14.24 pounds of fruit for 16 servings of fruit salad. If each serving contains the same amount of fruit, how much fruit is in each serving?

- 0.089 pound
- 1.76 pounds
- 0.89 pound
- 17.2 pounds