

Chapter 4 - Cumulative Assessment

1. Write the following expressions using numbers.

- a. Subtract forty-eight from one hundred twenty-six and then multiply by three

$$(126 - 48) \times 3$$

- b. Subtract forty-eight from one hundred twenty-six and divide the difference by three.

$$(126 - 48) \div 3$$

- c. Multiply the difference of one hundred twenty-six and forty-eight by four.

$$(126 - 48) \times 4$$

2. Write the following expression in order from least to greatest.

$(121 - 61) \times 7$

$(121 - 61) \div 5$

$(121 - 61) \times 3$

$$\underline{(121 - 61) \div 5}$$

Least

$$\underline{(121 - 61) \times 3}$$

Middle

$$\underline{(121 - 61) \times 7}$$

Greatest

Did you have to evaluate the expressions in order to put them in order? Explain.

No, you do not need to evaluate. Each expression has $(121 - 61)$, so you need to only look at the equation outside the parenthesis to determine how small or large the answer will be.

3. a.) Heather has a job as a babysitter. She charges \$5 per hour. On Friday, she babysat for 3 hours. On Saturday, she babysat for 4 hours. Write an expression that models the amount of money Heather earned all together. Use grouping symbols in your expression.

Expression: $(3 + 4) \times 5$

- b.) Evaluate the expression to find the amount of money Heather earned by babysitting.

$$(3 + 4) \times 5 = 7 \times 5 = 35$$

Heather earned 35 dollars babysitting on Friday and Saturday.

4. Eddie said, "A storage container is too large to fill with unit cubes, but it still has volume because you can measure its length, its width and its height." Is Eddie correct? Explain your answer.

Yes, eddie is correct. If an object has length, width, and height, you can use those measurements to find its volume.

5. Make an estimate. Write a number sentence to show how you estimated. Then solve. Use your estimate to see if your answer makes sense. Use U.S. traditional multiplication to solve the problem.

$488 \times 22 = ?$

Estimate: $500 \times 20 = 10,000$

Answer: 9,736

$$\begin{array}{r} 488 \\ \times 22 \\ \hline 976 \\ + 9760 \\ \hline 9736 \end{array}$$

6. Make an estimate. Write a number sentence to show how you estimated. Then solve. Use your estimate to see if your answer makes sense. Use U.S. traditional multiplication to solve the problem.

$32 \times 81 = ?$

Estimate: $30 \times 80 = 2,400$

Answer: 2,592

$$\begin{array}{r} 32 \\ \times 81 \\ \hline 32 \\ + 2560 \\ \hline 2592 \end{array}$$

7. Theo is making welcome baskets for the new tenants in his apartment complex. He has 64 tea candles to put into 7 baskets. He wants to put the same number of candles in each basket. How many candles should he put in each basket?

9 Candles

Number model: $64 \div 7 = 9 R1$

$$\begin{array}{r} 9 R1 \\ 7 \overline{) 64} \\ \underline{- 63} \\ 1 \end{array}$$

Explain what you did with the remainder.

I ignored the remainder because he wanted an equal amount in each basket and splitting a candle into parts does not make sense

8. Justin has 4 pounds of peanuts. He wants to fill 6 bags with peanuts for a party. If he wants to put the same amount of peanuts in every bag, how much peanuts should he put in each bag?

$\frac{4}{6}$ pounds of peanuts

Number model: $4 \div 6 = \frac{4}{6}$

Explain what you did with the remainder.

You cannot give a whole pound of peanuts to each person so I reported it as a fraction.

9. Kristine is studying for a science exam. She studied for $\frac{2}{3}$ hour on Tuesday, $\frac{1}{3}$ hour on Wednesday, and $\frac{2}{3}$ hour on Thursday. How much did Kristine study for in all?

Kristine studied for $1\frac{2}{3}$ hours.

Number model: $\frac{2}{3} + \frac{1}{3} + \frac{2}{3}$

$$\frac{2}{3} + \frac{1}{3} + \frac{2}{3} = \frac{5}{3} = 1\frac{2}{3}$$

10. Bryant spent 24 minutes exercising at the gym. He spent $\frac{1}{3}$ of the time on the stair climber. How many minutes did Bryant spend on the stair climber?

Bryant spent 8 minutes on the stair climber.

Number model: $\frac{1}{3} \times 24 = 8$

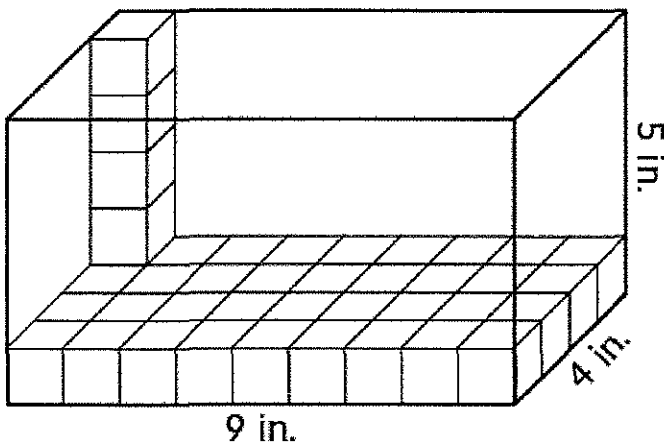
11. Rewrite each power of 10 in exponential notation and then solve.

a. $5 \times 1,000 = 5 \times 10^{\square} = \underline{5,000}$

b. $36 \times 10,000 = 36 \times 10^{\square} = \underline{360,000}$

c. $45 \times 1,000,000 = 45 \times 10^{\square} = \underline{45,000,000}$

12. The rectangular prism below is partially packed with centimeter cubes. (a.) Find the volume of the prism. (b.) Then describe the three different strategies you could use to find the volume.



Volume. 180 in³

$$5 \times 4 \times 9 = 180$$

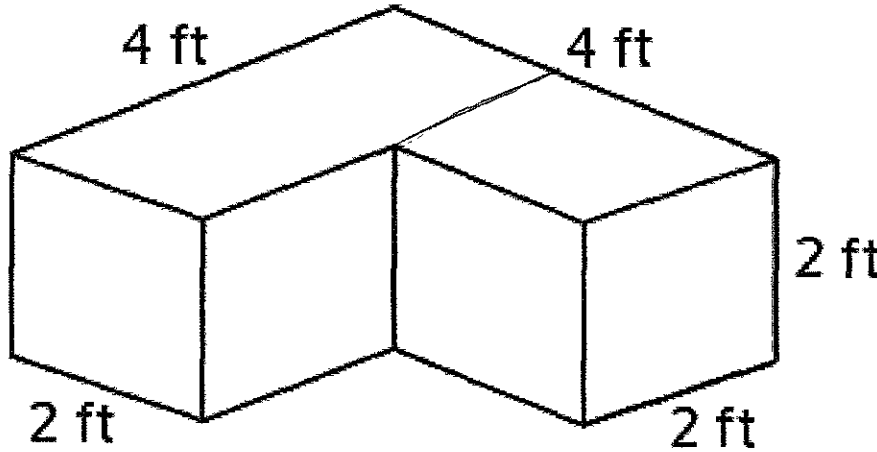
Strategy 1: $V = B \times h$

Strategy 2: $V = l \times w \times h$

Strategy 3: count all the cubes

13. This drawing is a model of a fish tank. What is the approximate volume of the fish tank?

Volume: 24 ft³



$$2 \times 2 \times 2 = 8 \text{ ft}^3$$

$$2 \times 2 \times 4 = 16 \text{ ft}^3$$

$$\begin{array}{r} 16 \\ + 8 \\ \hline 24 \text{ ft}^3 \end{array}$$

Explain how you found the volume of the fish tank.

First, you need to split the figure into 2 rectangles.
Then, find the volume of each rectangle. Last, add
the two volumes together to get the total volume
of the fish tank.