Lesson 17 Practice Problems

1. Describe a situation where each of the following quantities might be useful.

   a. -20 gallons per hour

   b. -10 feet per minute

   c. -0.1 kilograms per second

2. A bank charges a service fee of $7.50 per month for a checking account.

   A bank account has $85.00. If no money is deposited or withdrawn except the service charge, how many months until the account balance is negative?

3. A submarine is searching for underwater features. It is accompanied by a small aircraft and an underwater robotic vehicle.

   At one time the aircraft is 200 m above the surface, the submarine is 55 m below the surface, and the underwater robotic vehicle is 227 m below the surface.

   a. What is the difference in height between the submarine and the aircraft?

   b. What is the distance between the underwater robotic vehicle and the submarine?

   (From Unit 7, Lesson 10.)

4. Evaluate each expression. When the answer is not a whole number, write your answer as a fraction.

    a. $-4 \cdot -6$

    b. $-24 \cdot \frac{-7}{6}$

    c. $4 \div -6$

    d. $\frac{4}{3} \div -24$

(From Unit 7, Lesson 16.)

5.   a. A restaurant bill is \$21. You leave a 15% tip. How much do you pay including the tip?

    b. Which of the following represents the amount a customer pays including the tip of 15% if the bill was b dollars? Select **all** that apply.
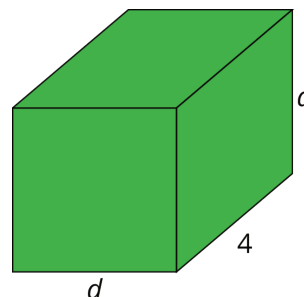
        ○ $15b$

        ○ $b + 0.15b$

        ○ $1.15b$

        ○ $1.015b$

        ○ $b + \frac{15}{100}b$

        ○ $b + 0.15$

        ○ $0.15b$

(From Unit 6, Lesson 7.)

6. Consider a rectangular prism with length 4 and width and height d.

    a. Find an expression for the volume of the prism in terms of d.

    b. Compute the volume of the prism when $d = 1$, when $d = 2$, and when $d = \frac{1}{2}$.

(From Unit 4, Lesson 15.)

Accelerated 6 Unit 7

Lesson 17

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