

**Chapter
1****Cumulative Assessment** (continued)

7. When $a = -9$ and $b = -6$, which expression has a value of -3 ?

F. $a + b$

H. $a - b$

G. $|a + b|$

I. $|a - b|$

8. Which of the following has the **greatest** value?

A. $|3|$

C. $-|-5|$

B. 0

D. $|-4|$

9. You record the daily low temperatures for four days at a ski lodge. What is the mean low temperature?

F. -16°C

G. -4°C

H. 2.5°C

I. 4°C

Low Temperature	
Thursday	-3°C
Friday	-6°C
Saturday	-5°C
Sunday	-2°C

10. **EXTENDED RESPONSE** In each of the equations or inequalities below, find all the **integer** values of x that make the equation or the pair of inequalities true. Explain your reasoning for each part.

Part A $|x| = 17$

Values of x _____

Part B $|x + 9| = 15$

Values of x _____

Part C $|x - 10| \leq 13$ and $|x - 10| \geq 9$

(Find the values of x that make both inequalities true.)

Values of x _____

**Chapter
2****Cumulative Assessment**

1. What is the value of the following expression when $x = -9$, $y = -2$, and $z = 3$?

$$\frac{x - z}{-y}$$

- A. -6
B. -3
C. 3
D. 6
2. Which of the following has the **greatest** value?
- F. $5 - 9$
G. $5 - (-9)$
H. $-5 - 9$
I. $-5 - (-9)$
3. **GRIDDED RESPONSE** What is the next number in the pattern below?

5, -10, 20, -40, ...

4. Which of the following describes a correct method for finding the sum below?

$$-\frac{7}{2} + \frac{3}{4}$$

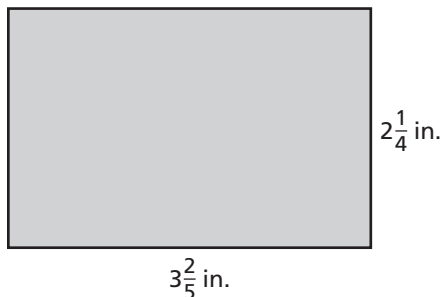
- A. Write the sum of the numerators over the sum of the denominators. Simplify.
- B. Rewrite using the LCD. Write the sum of the numerators over the sum of the denominators. Simplify.
- C. Rewrite using the LCD. Write the sum of the numerators over the common denominator. Simplify.
- D. Rewrite using the LCD. Write the difference of the numerators over the common denominator. Simplify.
5. What is the area, in square inches, of the rectangle?

F. $5\frac{13}{20}$

G. $6\frac{1}{10}$

H. $7\frac{13}{20}$

I. $11\frac{3}{10}$



**Chapter
2****Cumulative Assessment** (continued)

6. Which of the following has the **greatest** value?

A. $|4.4|$

C. $-\left|\frac{9}{2}\right|$

B. $|-4.28|$

D. $\left|-4\frac{3}{5}\right|$

7. A board is $6\frac{1}{2}$ feet long. You cut off a $1\frac{3}{4}$ -foot piece and a $2\frac{2}{3}$ -foot piece. How much of the original board is left?

F. $-2\frac{1}{2}$ feet

H. $2\frac{1}{12}$ feet

G. $-\frac{1}{6}$ foot

I. $4\frac{5}{12}$ feet

8. A truck driver drove 49 miles in $1\frac{1}{3}$ hours. What was the average speed, in miles per hour, for this trip?

A. $32\frac{2}{3}$

C. $50\frac{1}{3}$

B. $36\frac{3}{4}$

D. $65\frac{1}{3}$

9. **SHORT RESPONSE** When working overtime, an auto mechanic gets paid 1.5 times the normal hourly wage. Overtime is the amount of time worked beyond 40 hours in a week. The auto mechanic's normal hourly wage is \$21.00. Last week, the auto mechanic worked 46 hours.

Part A Write an expression to represent the amount of money earned last week. Explain your reasoning.

Expression _____

Part B Evaluate the expression you wrote in Part A to find the amount of money earned last week. Show your work.

The auto mechanic earned _____ last week.

**Chapter
3****Cumulative Assessment**

1. Which of the following equations is equivalent to the equation $-5(3x - 8) = -45$?

A. $-15x - 40 = -45$

C. $-15x - 8 = -45$

B. $-15x + 40 = -45$

D. $-15x + 8 = -45$

2. Which of the following lists is ordered from least to greatest?

F. 11, $|4|$, $|-2|$, 0, -6

H. -6 , 0, $|-2|$, $|4|$, 11

G. 0, $|-2|$, $|4|$, -6 , 11

I. -6 , $|4|$, $|-2|$, 0, 11

3. **GRIDDED RESPONSE** What is the value of the expression below?

$$-58.8 \div (-3.5 \times 2)$$

4. Which of the following describes a correct method for solving the equation below?

$$-\frac{7}{2}n + 5 = -16$$

A. Add 5 to both sides, then divide both sides by $\frac{2}{7}$.

B. Subtract 5 from both sides, then multiply both sides by $-\frac{7}{2}$.

C. Add -5 to both sides, then multiply both sides by $-\frac{2}{7}$.

D. Subtract 5 from both sides, then add $\frac{7}{2}$ to both sides.

5. What is the area, in square inches, of a triangle with a base of $2\frac{1}{3}$ inches and a height of $2\frac{1}{4}$ inches?

F. $2\frac{5}{8}$

H. $4\frac{1}{12}$

G. $4\frac{1}{24}$

I. $5\frac{1}{4}$

**Chapter
3****Cumulative Assessment** (continued)

6. For which values of a and b is the following statement *not* true?

$$|a| - |b| = -5$$

- A. $a = -3, b = 8$ C. $a = 3, b = 8$
B. $a = -2, b = -7$ D. $a = 7, b = 2$
7. A loon is flying at a height of 10 feet above a lake. The loon dives into the water to catch a fish that is at a depth of 6 feet. What is the change in elevation of the loon?

- F. -16 feet H. -4 feet
G. -10 feet I. 16 feet

8. Which of the following is the sum of $\frac{1}{2}$ and $-\frac{2}{3}$?

- A. $-1\frac{1}{6}$ C. $-\frac{1}{6}$
B. $-\frac{1}{5}$ D. $-\frac{1}{12}$

9. **EXTENDED RESPONSE** One year ago, Derek joined a health club. He paid a yearly membership fee of \$259.99 that covers all the club's services except use of the racquetball courts. Derek paid \$3.75 each time he used a racquetball court. For the entire year at the health club, Derek paid a total of \$436.24.

Part A Write an equation to represent the problem. Use r to represent the number of times Derek used one of the racquetball courts. Explain your reasoning.

Equation _____

Part B Solve the equation you wrote in Part A to find how many times Derek used a racquetball court. Show your work.

Derek used a racquetball court _____ times.

Chapter 5 Cumulative Assessment

1. Suppose that the equation below is true.

$$\frac{a}{b} = 5$$

Which of the following equations is also true?

- A. $\frac{a+2}{b+2} = 5$ C. $\frac{2a}{2b} = 5$
B. $\frac{a-2}{b-2} = 5$ D. $\frac{2a}{2b} = 2(5)$

2. Which of the following has the **greatest** value?

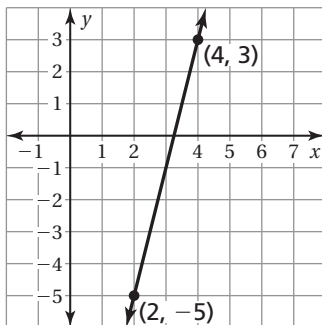
- F. $9 + (-9)$ H. $9 \cdot (-9)$
G. $9 - (-9)$ I. $9 \div (-9)$

3. **GRIDDED RESPONSE** How many **miles** are equivalent to 3.1 kilometers?
(Use 1 kilometer \approx 0.62 mile.)

4. What is the perimeter, in yards, of a rectangular garden that has a length of 10 yards and a width of 5 yards?

- A. 15 C. 30
B. 25 D. 50

5. A line is graphed on the coordinate grid below.



Which of the following points is found on the line?

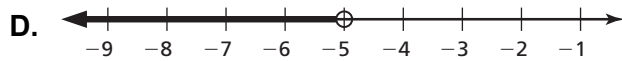
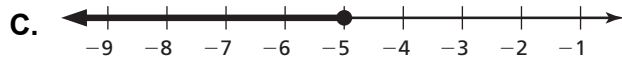
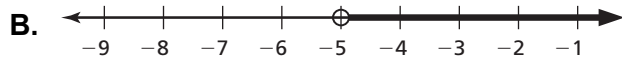
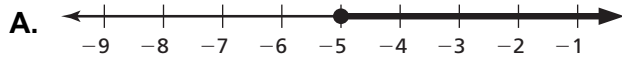
- F. $(3, -2)$ H. $(5, 6)$
G. $(3, 0)$ I. $(5, 7)$

Chapter 5

Cumulative Assessment (continued)

6. Which graph represents the solution of the inequality below?

$$15 \leq -3x$$



7. Which of the following describes a correct method for solving the equation below?

$$\frac{4}{9} + z = 30$$

F. Add $\frac{4}{9}$ to each side.

H. Multiply each side by $\frac{4}{9}$.

G. Subtract $\frac{4}{9}$ from each side.

I. Multiply each side by $\frac{9}{4}$.

8. What are the two numbers that could go in the box to make the equation below true?

$$|6 + \square| = 4$$

A. -4 and 4

C. 2 and 10

B. -2 and 2

D. -2 and -10

9. **EXTENDED RESPONSE** The school band decided to raise money by holding a car wash. The band spent \$32 to buy the needed supplies. They will charge \$5 for each car that they wash.

Part A Create a table showing the profit (total money earned minus expenses) that the band will make for washing 1 through 10 cars. Explain your reasoning.

Part B What will be the band's profit for washing 40 cars? Explain your reasoning.

Profit for 40 cars \$ _____

Part C At some point during the day, could the band ever have a profit of exactly \$107? Explain your reasoning.

Chapter 6 Cumulative Assessment

1. Sonja bought a new van for her business. The cost of the van was \$35,000, and she had to pay 6% sales tax. What was the total cost of the van, including tax?

- A. \$32,900
- B. \$35,210
- C. \$35,600
- D. \$37,100

2. What is the value of the expression $\frac{3}{4} \div \left(-\frac{1}{8}\right)$?

- F. -6
- G. $-\frac{1}{6}$
- H. $\frac{1}{6}$
- I. 6

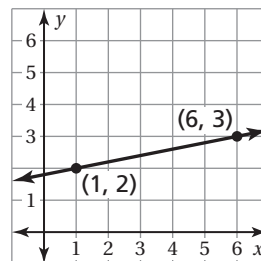
3. **GRIDDED RESPONSE** A radio station gave free tickets to 10% of the people attending a concert. The radio station gave 640 people free tickets. What is the total number of people who attended the concert?

4. The Sharadze family is planning a car trip to Atlanta, Georgia, which is 279 miles from their home. They plan to drive at an average speed of 62 miles per hour. They also plan to stop for lunch for 45 minutes. Based on their plan, when should they leave in order to arrive in Atlanta at 3:00 P.M.?

- A. 9:25 A.M.
- B. 9:45 A.M.
- C. 10:30 A.M.
- D. 11:15 A.M.

5. What is the slope of the line?

- F. $\frac{1}{5}$
- G. $\frac{1}{2}$
- H. 2
- I. 5



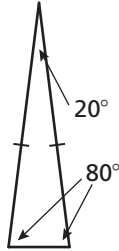
6. What number goes in the box below to make the statement true?

6% of is 300.

- A. 18
- B. 180
- C. 500
- D. 5000

**Chapter
7****Cumulative Assessment**

1. Which statement describes the triangle shown below?



- A.** It is isosceles and acute. **C.** It is scalene and acute.
B. It is isosceles and obtuse. **D.** It is scalene and obtuse.
2. A store owner rents a space in the mall for her store. The mall owner just increased the amount of her rent. As a result, the store owner decides to raise all prices in her store by 8%. What is the new price of an item that had an original price of \$75?

- F.** \$81.00 **H.** \$93.75
G. \$83.00 **I.** \$135.00
3. **GRIDDED RESPONSE** A recipe calls for $1\frac{3}{16}$ cups of flour. Write the amount of flour the recipe uses as a decimal.

4. Which expression is equivalent to 48.65?
- A.** $3.892 \div 0.08$ **C.** $389.2 \div 0.8$
B. $38.92 \div 0.08$ **D.** $3892 \div 8$

5. What number belongs in the box to make the statement true?

$$-\frac{3}{\square} = -\frac{1}{3}$$

- F.** -9 **H.** 1
G. -1 **I.** 9

**Chapter
7****Cumulative Assessment** (continued)

6. Which of the following are always congruent?
- A. adjacent angles C. complementary angles
- B. vertical angles D. supplementary angles
7. The students in Mrs. Spitzer's class took the same math test. The results of four students are listed below.

Maria answered $\frac{4}{5}$ of the problems correctly.

Monica answered 0.9 of the problems correctly.

Kevin answered $\frac{3}{4}$ of the problems correctly.

Julian answered 86% of the problems correctly.

Which student answered the **most** problems on the test correctly?

- F. Maria H. Kevin
- G. Monica I. Julian
8. **EXTENDED RESPONSE** You design a logo for a marketing company. As part of the proposal, you submit a scale drawing of the logo.

Part A The scale drawing is a parallelogram with a base of 8 inches, a height of 3 inches, and a side length of 4 inches. Draw and label the shape of the logo.

Part B What is the perimeter and area of the logo in the scale drawing?

Perimeter: _____ Area: _____

Part C The scale drawing has a scale factor of 4 : 1. What is the perimeter and area of the actual logo?

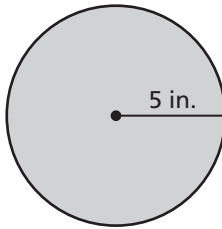
Perimeter: _____ Area: _____

**Chapter
8****Cumulative Assessment**

1. Ms. Donahue rents a space in the mall for her store. The mall owner just increased the amount of her rent. As a result, Ms. Donahue decided to raise all the prices in her store by 5%. What is the new price of an item that had an original price of \$80?

A. \$84
B. \$85
C. \$120
D. \$160

2. **GRIDDED RESPONSE** What is the area, in square inches, of the circle below? Use 3.14 for π .



3. When doubled, a recipe calls for $\frac{7}{4}$ cups of flour. Which of the following is equivalent to $\frac{7}{4}$?

F. 7.4
G. 1.75
H. 0.571
I. 0.28

4. Which equation does NOT correctly use the distributive property?

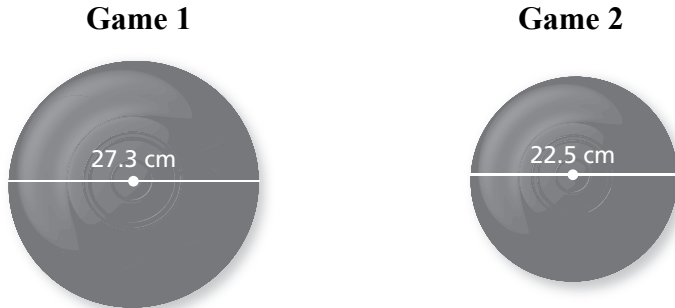
A. $a(b + c) = ab + ac$
B. $a(b - c) = ab - ac$
C. $(a + b)c = ac + bc$
D. $a + (b + c) = (a + b) + (a + c)$

5. The profit y from selling x muffins can be represented by a linear function. The profit from selling 5 muffins is \$4. The profit from selling 7 muffins is \$8. What is the slope of the line represented by the data?

F. $\frac{1}{2}$
G. 1
H. $\frac{4}{5}$
I. 2

**Chapter
8****Cumulative Assessment** (continued)

6. The circular flying discs used for two games are shown below.



The circumference of the flying disc for the first game is how many centimeters greater than the circumference of the flying disc used for the second game, to the nearest centimeter? Use 3.14 for π .

- A. 2 C. 8
B. 5 D. 15
7. Selena was finding the area of a circle with a radius of 7 units. Her work is shown in the box below.

$$\begin{aligned} A &= \pi r^2 \\ &= 3.14 \times 7^2 \\ &= 3.14 \times 14 \\ &= 43.96 \text{ units}^2 \end{aligned}$$

What should Selena do to correct the error that she has made?

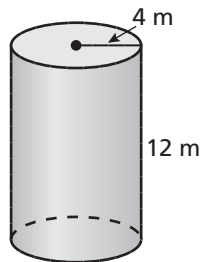
- F. Use 14 for the value of r .
G. Use 3.5 for the value of r .
H. Use 49 instead of 14 for 7^2 .
I. Use the formula $2\pi r$.
8. **SHORT RESPONSE** Explain how you know when two angles are complementary angles and when two angles are supplementary angles.

**Chapter
9****Cumulative Assessment** (continued)

5. **GRIDDED RESPONSE** Simplify the expression below.

$$-103.2 \div (-15.3 + 6.7)$$

6. A cylinder and its dimensions are shown below.



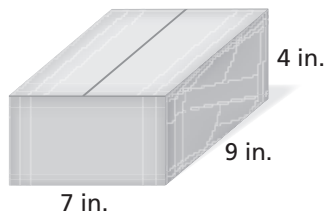
What is the surface area of the cylinder (Use 3.14 for π .)

- A. 100.48 m^2 C. 401.92 m^2
B. 301.44 m^2 D. 602.88 m^2
7. Solve the equation below for x .

$$2(x + 5) = 3(x - 4)$$

- F. $-\frac{22}{5}$ H. $\frac{22}{5}$
G. -2 I. 22

8. **EXTENDED RESPONSE** A box is in the shape of a rectangular prism. The dimensions of the prism are shown below.



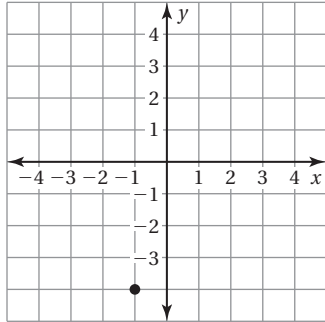
Part A A manufacturer doubles the height of the prism. What is the new volume and surface area? How does this affect the volume of the prism?

Part B The manufacturer wants to triple the volume of the prism in Part A. Which dimension should he triple to use the least amount of material? Explain your reasoning.

**Chapter
10**

Cumulative Assessment (continued)

6. The point $(-1, -4)$ is plotted on the coordinate grid below.



Douglas correctly graphed a line through the point $(-1, -4)$ that has a slope of 4. Which of the following points is also on the line that he graphed?

- A. $(3, -4)$
- B. $(-1, 0)$
- C. $(1, 4)$
- D. $(0, 4)$

7. There are four schools in your division for sports. You counted the number of soccer players and the number of football players in each school. Your results are shown in the table below.

School	Soccer	Football
A	20	40
B	12	18
C	15	35
D	26	42

Based on the table, which school has the greatest ratio of soccer players to football players?

- F. School A
- G. School B
- H. School C
- I. School D

8. **SHORT RESPONSE** You have 4 blue marbles, 3 red marbles, 2 green marbles, and 3 yellow marbles in a bag. You randomly choose one marble.

Part A How many possible outcomes are there?

Part B Describe the likelihood of choosing *not* blue. Explain your reasoning.