**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**CHAPTER 4**

**Cumulative Review**

1. **Packaging** A computer monitor is packaged in a cube-shaped box with an inside edge length of 2.5 feet. What is the volume of the box? *(Lesson 1.1)*

**Evaluate the expression.** *(Lessons 1.1, 1.2, 2.2–2.6)*

1. 32 • 23 –17 \_\_\_\_\_\_\_\_\_

2

3

1. (9)(5 + 12) \_\_\_\_\_\_\_\_\_

4

*x*

1. when *x* = –24 \_\_\_\_\_\_\_\_\_\_
2. 7(2*y* – 1) when *y* = 3 \_\_\_\_\_\_\_\_\_\_
3. | *m* | when *m* = –8 \_\_\_\_\_\_\_\_\_\_
   1. –3*x* – (*x* – 2) when *x* = –4 \_\_\_\_\_\_\_\_\_

**Write an algebraic expression, an equation, or an inequality.**

*(Lessons 1.3, 1.4)*

1. The quotient of 5 times a number *x* and 7 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The difference of a number *y* cubed and 4 is less than the product of 8 and the number *y*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 6 times the sum of a number *z* and 3 is 27. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Check whether the given number is a solution of the equation or inequality**

*(Lessons 1.3, 1.4, 2.1– 2.3)*

1. 9 –2*x* = –3; –6 \_\_\_\_\_\_\_\_\_\_because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 21 ≥ 3*y* 25; 4 \_\_\_\_\_\_\_\_\_\_because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2

1

1. *z* + 6 < –3*z* + 12; 8 \_\_\_\_\_\_\_\_\_\_because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Find the sum, difference, product, or quotient.**

*(Lessons 2.2–2.6)*

1. –2.7 + (–8.6) \_\_\_\_\_\_\_\_\_\_\_\_\_
2. – – = \_\_\_\_\_\_\_\_\_\_\_\_

2

3

5















1

1

10



1. –8 • 9 \_\_\_\_\_\_\_\_\_\_\_
2. –3(–13)(–4) \_\_\_\_\_\_\_\_\_\_\_\_

3

5















1. 18 ÷ \_\_\_\_\_\_\_\_\_\_\_\_\_

12

11















3

4



1. ÷ \_\_\_\_\_\_\_\_\_\_\_

**20.** **Checkbook** You record the following deposits and withdrawals in your checkbook: $75, –$36, $51, –$17, –$24. Find the mean of the account activity. *(Lesson 2.6)*

\_\_\_\_\_\_\_\_\_\_

**Order the numbers from least to greatest.** *(Lesson 2.7)*

2

36



1. , 0.5, –6.2, 2, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6



1

3



3

1. , , , 2.1, , –3.5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve the equation.** *(Lessons 3.1– 3.4)*

1. *a* – 17 = 9 \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3

*k*



1. = 11 \_\_\_\_\_\_\_\_\_\_\_\_\_\_

2

3

*x*

1. – 7 = 17 \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 7*q* + 18 – 11*q* = –6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 32 = (15*p* – 10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2

5

* 1. 7(2*m* – 3) = 12*m* – 15 \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve the proportion.** *(Lesson 3.6)*

42

*x*

7

8

1. = \_\_\_\_\_\_\_\_\_\_\_\_\_

4

3

*y*

16

60

1. = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

9

21

4

*z*

*z*



1. = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Scale Drawing** A zoo is designing a new polar bear exhibit using the scale

1 in.: 4 ft. The drawing has a length of 25 inches and a width of 15 inches. What will be the actual length and width of the polar bear exhibit? *(Lesson 3.6)*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Use the percent equation to answer the question.** *(Lesson 3.7)*

1. What number is 15% of 28? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What percent of 62 is 24.8? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 88.2 is what percent of 252? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What number is 225% of 180? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. **Favorite Vegetable** In a school favorite vegetable survey of 375 students, 165 of the students surveyed said that corn is their favorite vegetable. What percent of the students surveyed said corn is their favorite vegetable? *(Lesson 3.7)*

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Graph the equation.** *(Lesson 4.2, 4.3, 4.5)*

1. a. 3*x* + *y* = 5 b. *y* = 6

c. 7*x* – 14*y* = 28

**Find the slope of the line that passes through the points.** *(Lesson 4.4)*

1. (2, 7) and (11, 15) \_\_\_\_\_\_\_\_\_\_\_\_
2. (–3, –7) and (–7, 5) \_\_\_\_\_\_\_\_\_\_\_\_
3. (–1, –2) and (–9, 6) \_\_\_\_\_\_\_\_\_\_\_\_

**Identify the slope and y-intercept of the line with the given equation.**

*(Lesson 4.5)*

1. *y* = –5*x* + 8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. *x* + 2*y* = 10 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 4*x* – 3*y* = 24 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tell whether the equation represents direct variation. If so, identify the constant of variation.** *(Lesson 4.6)*

1. 5*x* –7*y* = 0 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1

2

1. *x* – 2 *y* = 3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Cereal** The amount of sugar *s* (in grams) in a particular cereal varies directly with the amount of cereal *C* in the serving. The box recommends a serving size of 25 grams, which contains 5 grams of sugar. *(Lesson 4.6)*
   1. Write a direct variation equation that relates *C* and *s*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What would be the amount of sugar in a 35-gram serving of cereal? \_\_\_\_\_\_