

**CHAPTER**  
**3****Cumulative Test**

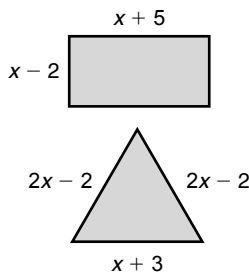
Choose the best answer.

- Evaluate  $m - 7$  for  $m = 8$ .  
A -15                      C 1  
B -1                         D 15
- Add  $-75 + 20$ .  
A -95                        C 55  
B -55                        D 95
- Angela ran for 45 minutes. Her pace was 9 miles per hour. How far did she run?  
A 5 miles                    C 8.55 miles  
B 6.75 miles                D 12 miles
- Evaluate  $-8^4$ .  
A -4096                    C 32  
B -32                        D 4096
- Which number is an integer?  
A -8.5                      C  $\sqrt{15}$   
B  $\frac{1}{4}$                          D 7
- The equation  $4(9 + 1) = 4(1 + 9)$  illustrates which property?  
A Addition Property of Equality  
B Associative Property of Addition  
C Commutative Property of Addition  
D Distributive Property
- Evaluate  $2 + g^2$  for  $g = 7$ .  
A 16                         C 51  
B 18                         D 81
- Which situation is best represented by  $75 + x = 225$ ?  
A Brie had \$75 before she got her paycheck. Now she has \$225. How much was her paycheck?  
B Jo's notebook has 225 sheets. Greg's notebook has 75 sheets. How many sheets do they have together?  
C The tower was 75 feet high. It was extended an additional 225 feet. How high is the tower now?  
D \$225 was divided among 75 people. How much did each person receive?
- For which equation is  $n = -2$  a solution?  
A  $n + 8 = 10$               C  $n - 8 = -10$   
B  $n - 8 = 10$               D  $n + 8 = -10$
- What is the value of  $d$  if  $\frac{2}{3}d = 9$ ?  
A  $\frac{2}{27}$                         C 6  
B 3                             D  $13\frac{1}{2}$
- Solve  $2x - 1 = 29$ .  
A 14                         C 28  
B 15                         D 32
- Solve  $\frac{a}{10} - \frac{1}{2} = \frac{1}{2}$  for  $a$ .  
A  $a = 0$                     C  $a = 10$   
B  $a = 5$                     D  $a = 20$
- Solve  $\frac{2x + 5}{3} = 7$ .  
A  $2\frac{1}{2}$                         C 8  
B 3                            D 13

**CHAPTER 3** **Cumulative Test**  
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14. Solve  $3(b - 1) - 2(b + 4) = 5$ .  
**A** -6                      **C** 0  
**B** 2                         **D** 16
15. Solve  $-2x - 6 = 2x + 6$ .  
**A** -3                        **C** all real numbers  
**B** 0                         **D** no solution

16. The rectangle and triangle shown below have the same perimeter.



What is the value of  $x$ ?

- A**  $\frac{3}{4}$                         **C** 5  
**B**  $\frac{4}{3}$                         **D** 7
17. The ratio of freshwater fish to saltwater fish at Jerry's Pet Store is 12 to 5. Jerry has 40 saltwater fish in his store. How many freshwater fish does he have?  
**A** 17                        **C** 200  
**B** 96                        **D** 480
18. On a map, the distance from Happy Hill Park to Rainbow Valley Park is  $4\frac{1}{2}$  inches. What is the actual distance between the two parks if the scale is  $\frac{1}{2}$  inch: 3 miles?  
**A**  $6\frac{3}{4}$  miles              **C** 15 miles  
**B**  $13\frac{1}{2}$  miles             **D** 27 miles

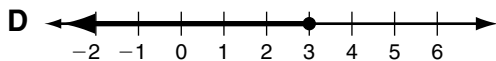
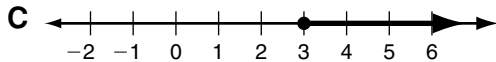
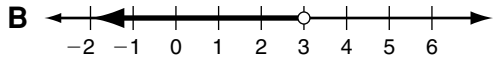
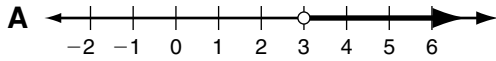
19. Find 80% of 40.  
**A** 24                        **C** 48  
**B** 32                        **D** 50
20. Solve  $\frac{10}{x + 3} = \frac{4}{5}$ .  
**A** 5                         **C** 11.75  
**B** 9.5                      **D** 38
21. The mean,  $m$ , of two numbers,  $x$  and  $y$ , can be found by the formula  $m = \frac{x + y}{2}$ . Solve this formula for  $x$ .  
**A**  $x = 2m - y$             **C**  $x = \frac{1}{2}m + y$   
**B**  $x = \frac{m - 2}{y}$                  **D**  $x = \frac{m + y}{2}$
22. Solve  $a = 2b - c$  for  $b$ .  
**A**  $b = 2(a + c)$             **C**  $b = \frac{1}{2}(a - c)$   
**B**  $b = \frac{a + c}{2}$                  **D**  $b = 2a - c$
23. What is the solution set to the equation  $|x| + 8 = 5$ ?  
**A**  $\{-3\}$                     **C**  $\{-3, 3\}$   
**B**  $\{3\}$                      **D**  $\emptyset$
24. Solve  $|2x - 9| = 7$ .  
**A** 8                         **C** -8 and 8  
**B** 1 and 8                **D** no solutions

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continued

25. Which is the graph of  $x > 3$ ?

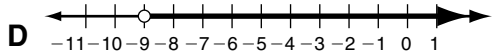
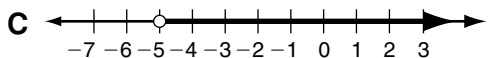
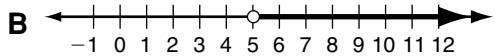
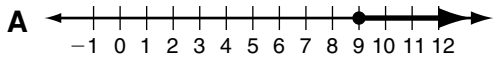


26. Which inequality could represent the following situation:

*The project must be completed in 6 days or less.*

- A**  $d < 6$                       **C**  $d > 6$   
**B**  $d \leq 6$                       **D**  $d \geq 6$

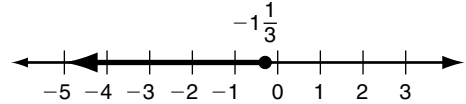
27. Which graph represents the solutions of  $b + 7 > -2$ ?



28. A parking lot holds 42 cars. There are 26 cars in the lot already. Which inequality can be solved to show all the numbers of cars  $c$  that can still park in the lot?

- A**  $26 + c < 42$                       **C**  $26 + 42 < c$   
**B**  $26 + c \leq 42$                       **D**  $26 + 42 \leq c$

29. Which inequality has the solutions shown below?

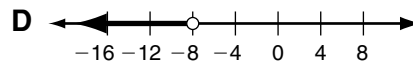
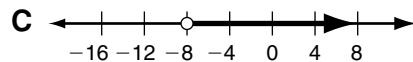
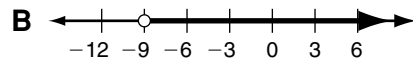
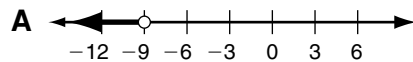


- A**  $-8p \leq 6$                       **C**  $-6p \leq 8$   
**B**  $-8p \geq 6$                       **D**  $-6p \geq 8$

30. A grocery store sells pumpkins for \$6.99 each. What are the possible numbers of pumpkins Mr. Biggs can buy with \$20.00?

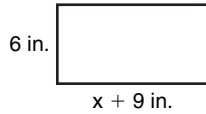
- A** 1                                      **C** 1, 2, or 3  
**B** 1 or 2                              **D** 1, 2, 3, or 4

31. Which graph represents the solutions of  $-2(5 + x) < 2^3$ ?



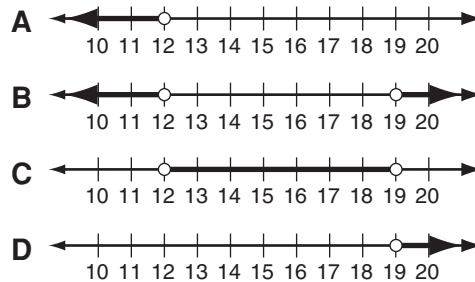
**CHAPTER 3** **Cumulative Test**  
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32. The area of the rectangle shown is more than 72 square inches. Which inequality can be used to find  $x$ ?

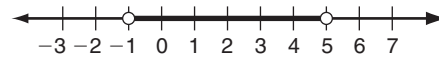


- A  $12 + 2(x + 9) > 72$
  - B  $12 + 2(x + 9) \geq 72$
  - C  $6(x + 9) > 72$
  - D  $6(x + 9) \geq 72$
33. Mrs. Mott called two companies about getting new uniforms for the soccer team. The first company she called charges \$70 per uniform. The second company she called charges \$280 plus \$30 per uniform. For how many uniforms will the cost from the first company be less expensive than the cost from the second company?
- A less than 7
  - B 7
  - C 8
  - D more than 8
34. Solve  $2x + 3 \geq x + x + 1$ .
- A  $x \geq -\frac{1}{2}$
  - B  $x \geq 1$
  - C no solutions
  - D all real numbers
35. Solve  $\frac{2}{3}(9 - x) < \frac{1}{3}x$ .
- A  $x < -18$
  - B  $x > 4\frac{1}{2}$
  - C  $x > 6$
  - D  $x > 12$

36. Which of the following is a graph of the solutions of  $2x < 24$  OR  $x - 6 > 13$ ?



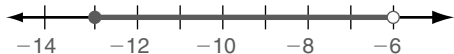
37. Which compound inequality is shown by the graph below?



- A  $f > -1$  AND  $f > 5$
  - B  $f > -1$  AND  $f < 5$
  - C  $f \geq -1$  OR  $f > 5$
  - D  $f \geq -1$  OR  $f < 5$
38. Solve  $-18 < 2n + 3 \leq 5$ .
- A  $-30 < n \leq 16$
  - B  $-22 < n \leq 4$
  - C  $-10\frac{1}{2} < n \leq 1$
  - D  $-7\frac{1}{2} < n \leq 4$
39. Solve  $|a| \leq 2$ .
- A  $a \leq -2$
  - B  $a \leq 2$
  - C  $a \leq -2$  OR  $a \geq 2$
  - D  $a \geq -2$  AND  $a \leq 2$
40. Solve  $|x + 8| - 5 > 2$ .
- A  $-5 < x < -1$
  - B  $x < -15$  OR  $x \geq -1$
  - C no solutions
  - D all real numbers

# Answer Key continued

17.  $-13 \leq c < -6$



18.  $a < 3$  OR  $a > 10$



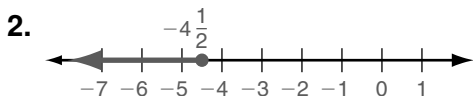
19.  $x \leq -1$  OR  $x > 1$

20.  $1 \leq x \leq 5$

21. all real numbers,  $\mathbb{R}$

## Chapter 3 Free-Response Test Form C

1. all real numbers greater than or equal to 9

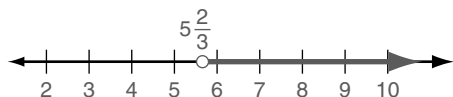


3.  $x > -2$

4.  $t =$  thickness;  $t \geq 4$



5.  $y > 5\frac{2}{3}$



6.  $f \geq -1$



7.  $24 + x \geq 64$ ;  $x \geq 40$

8.  $x > -\frac{1}{2}$

9.  $d \geq -45$

10. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 nights

11.  $n < \frac{2}{5}$

12.  $a \geq 16$

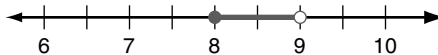
13. greater than 67

14. no solutions

15.  $y < \frac{9}{10}$

16. at least 17 baskets

17.  $8 \leq n < 9$



18.  $a > -4$  OR  $a \leq -7.5$



19.  $x \leq -0.5$  OR  $x > 0.25$

20. no solutions,  $\emptyset$

21.  $z \leq -2$  OR  $z \geq z - 1$

## Chapter 3 Performance Assessment

1 a.  $20 \leq 6b \leq 21$

b.  $3.34 \leq b \leq 3.50$

c. Possible answer: The repeating decimal  $3.3\bar{3}$  needs to be rounded up because  $6(\$3.33) = \$19.98$ , which would not win the game.

d. Possible answer: The values in the compound inequality represent dollars and cents, so you should graph solid points at 3.34, 3.35, 3.36, and so on, up to 3.50.

2 a.  $20 \leq 0.50p + 17.94 \leq 21$

b.  $4.12 \leq p \leq 6.12$

c. 5 or 6 packages

3 a.  $20 \leq 4g + 17.94 \leq 21$

b.  $0.515 \leq p \leq 0.765$

c. \$0.59 or \$0.69

## Chapter 3 Cumulative Test

1. C

2. B

3. B

4. A

5. D

6. C

7. C

8. A

## Answer Key continued

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- 9. C
- 10. D
- 11. B
- 12. C
- 13. C
- 14. D
- 15. A
- 16. D
- 17. B
- 18. D
- 19. B
- 20. B
- 21. A
- 22. B
- 23. D
- 24. B
- 25. A
- 26. B
- 27. D
- 28. B
- 29. D
- 30. B
- 31. B
- 32. C
- 33. A
- 34. D
- 35. C

- 36. B
- 37. B
- 38. C
- 39. D
- 40. B

### CHAPTER 4

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#### Section Quiz: Lessons 4-1 to 4-3

- 1. D
- 2. B
- 3. C
- 4. C
- 5. A
- 6. D
- 7. A
- 8. B

#### Section Quiz: Lessons 4-4 to 4-5

- 1. D
- 2. A
- 3. B
- 4. B
- 5. C
- 6. D
- 7. B
- 8. B
- 9. C