

Cumulative Test

For use after Chapters 1-3

Evaluate the expression when $x = 21$ and $y = 7$.

1. $x + 4$

2. $16 - y$

3. $\frac{x}{y}$

4. xy

Write the power in words and as repeated multiplication.
Then evaluate the power.

5. 9^2

6. 2^5

Evaluate the expression.

7. $12 + 16 \div 4$

8. $36 \div (8 - 2)$

9. $\frac{35 - 17}{3 \cdot 2}$

10. $14 + (5 - 2)^3$

State the absolute value and the opposite of the number.

11. 40

12. -151

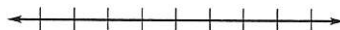
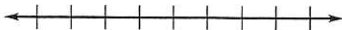
13. -2

14. 925

Graph the integers on the number line. Then write the integers in order from least to greatest.

15. -42, -40, -48, -45

16. -15, 8, -7, 2, 19

Evaluate the expression when $x = -6$.

17. $-x$

18. $|x|$

19. $4 + |x|$

20. $5 + (-x)$

Find the sum or difference.

21. $-16 + 4$

22. $1 + (-2)$

23. $-15 + (-15)$

24. $-15 - 8$

25. $36 - 54$

26. $-12 - (-25)$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. See left.

16. See left.

17. _____

18. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

25. _____

26. _____

Cumulative Test

For use after Chapters 1-3

27. The balance in your savings account is \$45. You withdraw \$30. Then you deposit \$35.50. What is your new balance?

Find the product or quotient.

28. $-10(13)$ 29. $-7(-18)$ 30. $4(-16)$
 31. $-90 \div 2$ 32. $-132 \div (-11)$ 33. $\frac{65}{-5}$

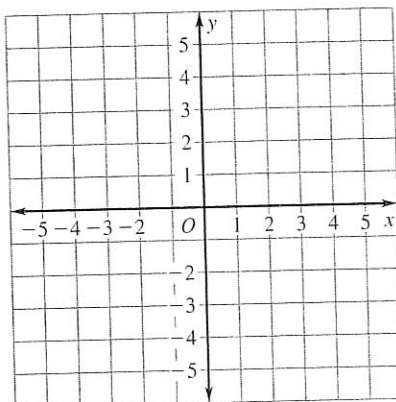
34. The table shows the number of hours of sleep a person got per night for one week. Find the mean, median, mode, and range of the data.

Day	Monday	Tuesday	Wednesday
Hours of sleep	6	8	6

Day	Thursday	Friday	Saturday	Sunday
Hours of sleep	6	7	9	7

Graph the given point on the coordinate grid.

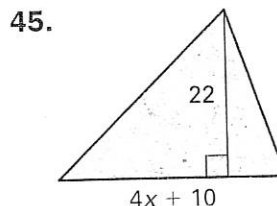
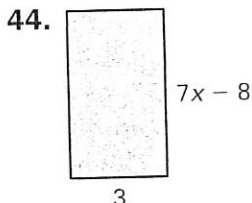
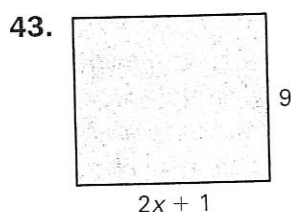
35. $A(2, 5)$
 36. $B(-4, 1)$
 37. $C(0, 3)$
 38. $D(-3, -5)$



Evaluate the expression.

39. $41 + 18 + 12$ 40. $4.2 + 10.1 + 9.9$
 41. $7(-8)(-2)$ 42. $3(-11)(14)$

Write and simplify an expression for the area of the rectangle or triangle.



Answers

27. _____
 28. _____
 29. _____
 30. _____
 31. _____
 32. _____
 33. _____
 34. _____
 35. See left.
 36. See left.
 37. See left.
 38. See left.
 39. _____
 40. _____
 41. _____
 42. _____
 43. _____
 44. _____
 45. _____

Cumulative Test

For use after Chapters 1-3

Simplify the expression.

46. $-w + 9 + 4w - 17$

47. $15 + 12a - a - 24$

48. $5(x - 9) - 2x$

49. $-3(n + 1) + 10$

50. You are taking a 6-hour train ride. During the first part of the trip, the train moves at an average speed of 65 miles per hour. During the second part of the trip, the train moves at an average speed of 40 miles per hour. Let t be the time it takes for the train to travel the first part of the trip. Write and simplify an expression in terms of t for the total distance you traveled in the train. Then find the total distance you traveled if the first part of the trip took 4 hours.

Write the verbal sentence as an equation. Then tell whether 16 is a solution.

51. The sum of 13 and a number is 29.

52. The difference of a number and 2 is 18.

53. The product of
- -3
- and a number is 48.

Solve the equation.

54. $a - 9 = 14$

55. $-2 = h + 10$

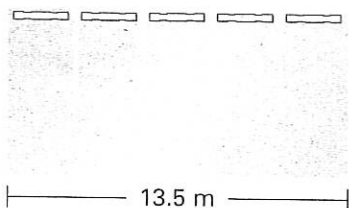
56. $-3x = 36$

57. $\frac{c}{5} = 17$

58. $z + 2.8 = -3.7$

59. $\frac{n}{-1.1} = 3.96$

60. The total length of the parking lot shown is 13.5 meters. Each of the parking spaces is equal in length. Find the width of one parking space.

**Solve the equation.**

61. $4d + 9 = -35$

62. $15 - 3h = 12$

63. $\frac{g}{4} + 6 = -2$

64. $-5x + 6 - x = 18$

65. $9(14 - t) = -117$

66. $-4(3u + 5) = 124$

67. $4c + 8 = 2(2c + 3)$

68. $7m + 9 = -m - 31$

Answers

46. _____

47. _____

48. _____

49. _____

50. _____

51. _____

52. _____

53. _____

54. _____

55. _____

56. _____

57. _____

58. _____

59. _____

60. _____

61. _____

62. _____

63. _____

64. _____

65. _____

66. _____

67. _____

68. _____

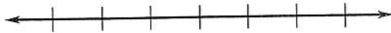
Cumulative Test

For use after Chapters 1-3

69. You are working two jobs to save money for a vacation. You earn \$6 per hour babysitting and \$8.50 per hour mowing lawns. Next week, you are scheduled to work 15 hours babysitting. How many hours must you work mowing lawns so that you can earn a total of \$175 next week?

Solve the inequality. Graph your solution on the number line.

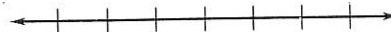
70. $9 + z \leq 22$



71. $a - 14 \geq 27$



72. $\frac{r}{2} > 25$



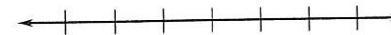
73. $-6n < -72$



74. $-8f - 16 \geq 0$



75. $5(10 + k) < 40$



Write the verbal sentence as an inequality. Then solve the inequality.

76. Fifteen is less than or equal to a number minus 10.
77. The quotient of a number and 7 is greater than or equal to 20.
78. Four is less than 2 times the difference of a number and 6.
79. Nine times the sum of a number and 1 is greater than -18 .
80. A truck driver is loading a truck with crates of oranges and bananas. The truck can haul no more than 3500 pounds. Each crate of oranges weighs 9 pounds and each crate of bananas weighs 14 pounds. The truck driver has received an order for 205 crates of bananas. What is the largest number of crates of oranges that the truck driver can haul without going over the limit?

Answers

69. _____

70. _____

See left.

71. _____

See left.

72. _____

See left.

73. _____

See left.

74. _____

See left.

75. _____

See left.

76. _____

77. _____

78. _____

79. _____

80. _____

Cumulative Test

For use after Chapters 1-7

Evaluate the expression when $a = 8$ and $b = 24$.

1. $a + 6$ 2. $30 - b$ 3. $\frac{b}{a}$ 4. ab

Evaluate the power.

5. 9^3 6. 2^5 7. $(0.5)^2$ 8. $(0.1)^4$

9. A plastic container is in the shape of a cube. The length of an edge of the container is 4.5 inches. What is the volume of the container?

Evaluate the expression.

10. $14 + 2(6)$ 11. $75 \div 3 - 10$ 12. $\frac{26 - 18}{2 \cdot 4}$

Order the integers from least to greatest.

13. $-5, 4, -1, -3, 2, 6$ 14. $15, -20, 13, -5, 0, 3$

Find the sum, difference, product, or quotient.

15. $16 + (-9)$ 16. $-10 + (-5)$ 17. $-6 + 2$
 18. $-7 - 11$ 19. $16 - (-2)$ 20. $-8(-7)$
 21. $-4(12)$ 22. $27 \div (-3)$ 23. $\frac{-112}{-14}$

24. The table shows the average daily temperature for a city over 5 days in the winter. Find the mean, median, mode, and range of the temperatures.

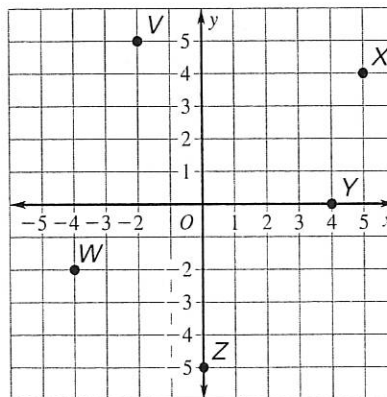
Day	Temperature (°F)
Monday	-2°F
Tuesday	2°F
Wednesday	3°F
Thursday	-1°F
Friday	3°F

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____

Give the coordinates of the point.

25. V
 26. W
 27. X
 28. Y
 29. Z



Cumulative Test

For use after Chapters 1-7

Identify the property that the statement illustrates.

30. $(mn)p = m(np)$

31. $7 + (-5) = -5 + 7$

32. $5 + 0 = 5$

Evaluate the expression.

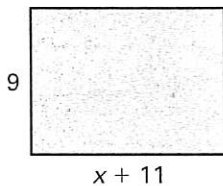
33. $5(12 - 7)$

34. $(7 + 9)(-2)$

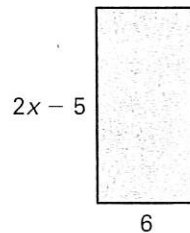
35. $(-1)(-16 + 3)$

Find the area of the rectangle or triangle.

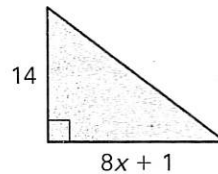
36.



37.



38.

**For the given expression, identify the terms, like terms, coefficients, and constant terms.**

39. $-8 + 2x - 8x + 9$

40. $-n + 4 - 10 + 3n$

Simplify the expression.

41. $4t - 6(2t - 1)$

42. $5(w - 2) - 8w$

43. $2p + 9 - (p + 4)$

Solve the equation.

44. $z + 4 = 12$

45. $a - 19 = -25$

46. $-9x = -54$

47. $\frac{d}{-1} = 5$

48. $10.5 + c = 9.2$

49. $1.4f = -4.2$

50. You deposit a check into your savings account. Before the deposit, your balance was \$142.35. After the deposit, your balance is \$238.12. How much was the deposit?

Solve the equation.

51. $3b + 5 = 14$

52. $10 - 6h = -20$

53. $\frac{x}{8} - 12 = -10$

54. $-7(1 - v) = 49$

55. $-2(3k + 16) = -53$

56. $-2y - 20 = 10 + 8y$

57. $4(3q + 2) = 2(6q + 4)$

58. $4t + 4 = 6(12 - 5t)$

Answers

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

38. _____

39. _____

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56. _____

57. _____

58. _____

Cumulative Test

For use after Chapters 1-7

59. Your long-distance phone company charges \$.39 per long-distance call plus an additional \$.05 per minute. Last month, you made 22 long-distance calls and your bill was \$14.08. How many minutes did you use?

Solve the inequality.

60. $u + 15 < -12$ 61. $8 - c \geq 6$ 62. $\frac{m}{24} \leq 3$
 63. $-5t - 7 > -22$ 64. $9(4 - n) \leq -18$ 65. $y - 2 > 16 - 5y$

66. You are throwing a surprise birthday party for your friend. You want to rent a private room at a restaurant. The restaurant charges a \$25 rental fee and \$5.75 per person for food and drinks. You can spend no more than \$94 for the event. What is the greatest number of people that can attend the party?

Write the prime factorization of the number.

67. 15 68. 64 69. 95 70. 294

Write the fraction in simplest form.

71. $\frac{9}{21}$ 72. $\frac{24}{86}$ 73. $\frac{16x}{18xy}$ 74. $\frac{10c^2}{4cd}$

75. An oxygen atom has a mass of approximately 2.6561×10^{-23} grams. Write this number in standard form.

Write the fraction or mixed number as a decimal.

76. $\frac{6}{25}$ 77. $-\frac{5}{11}$ 78. $4\frac{1}{15}$

Simplify the expression. Write your answer in simplest form.

79. $\frac{5t}{6} + \left(-\frac{t}{6}\right)$ 80. $-\frac{13m}{16} - \frac{7m}{12}$ 81. $\frac{2c}{3} - \frac{c}{4}$
 82. $\frac{2x^4}{3} \cdot \frac{x}{5}$ 83. $-\frac{6m}{35} \cdot \left(-\frac{7m}{8}\right)$ 84. $-\frac{3x^3}{5} \div \frac{3x^2}{25}$

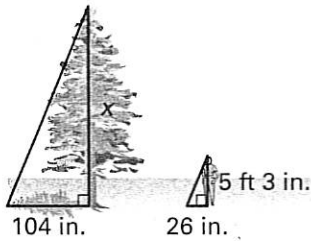
Answers

59. _____
 60. _____
 61. _____
 62. _____
 63. _____
 64. _____
 65. _____
 66. _____
 67. _____
 68. _____
 69. _____
 70. _____
 71. _____
 72. _____
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 81. _____
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 83. _____
 84. _____

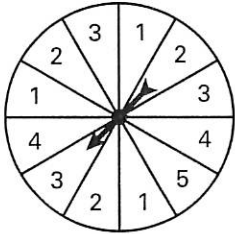
Cumulative Test

For use after Chapters 1-7

85. A recipe calls for $6\frac{2}{3}$ cups of flour. You want to make three-fourths of the recipe. How much flour should you use?
86. You travel 7 miles in 2 hours while rollerblading. At this rate, how far can you rollerblade in 4 hours?
87. A woman who is 5 feet 3 inches tall stands next to a tree. The length of the woman's shadow is 26 inches. The length of the tree's shadow is 104 inches. How tall is the tree in feet?



88. The spinner shown is divided into equal parts. Find the probability that the spinner lands on 3 or 4.



89. You are ordering a T-shirt from your school's math club as part of a fund-raiser. You need to choose from 8 different colors, 3 different sizes, and 5 different styles. How many different choices for T-shirts are possible?

Write the percent as a fraction or the fraction as a percent.

90. 21% 91. 45% 92. $\frac{3}{20}$ 93. $\frac{1}{4}$

Find the percent of the number.

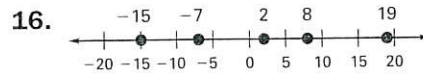
94. 20% of 35 95. 19.5% of 60 96. 0.2% of 150

Use the given information to find the new amount.

97. Wholesale price: \$319 98. Original price: \$80
Markup percent: 30% Discount percent: 25%
99. You deposit money into an account that earns simple annual interest at a rate of 3.7%. After 6 years, the balance in the account is \$3989.83. What was the amount of the deposit?

Answers

85. _____
86. _____
87. _____
88. _____
89. _____
90. _____
91. _____
92. _____
93. _____
94. _____
95. _____
96. _____
97. _____
98. _____
99. _____



-15, -7, 2, 8, 19

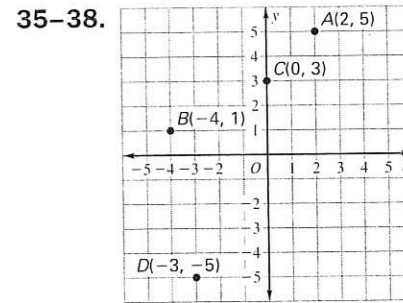
17. 6 18. 6 19. 10 20. 11 21. -12

22. -1 23. -30 24. -23 25. -18

26. 13 27. \$50.50 28. -130 29. 126

30. -64 31. -45 32. 12 33. -13

34. mean: 7; median: 7; mode: 6; range: 3



39. 71 40. 24.2 41. 112 42. -462

43. $(18x + 9)$ square units

44. $(21x - 24)$ square units

45. $(44x + 110)$ square units

46. $3w - 8$ 47. $11a - 9$ 48. $3x - 45$

49. $-3n + 7$ 50. $25t + 240$; 340 miles

51. $13 + n = 29$; solution

52. $n - 2 = 18$; not a solution

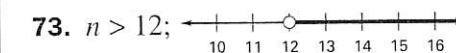
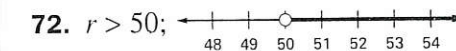
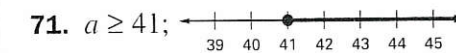
53. $-3n = 48$; not a solution

54. 23 55. -12 56. -12 57. 85

58. -6.5 59. -4.356 60. 2.7 m 61. -11

62. 1 63. -32 64. -2 65. 27 66. -12

67. no solution 68. -5 69. 10 hours



76. $15 \leq n - 10$; $n \geq 25$

77. $\frac{n}{7} \geq 20$; $n \geq 140$ 78. $4 < 2(n - 6)$; $n > 8$

79. $9(n+1) > -18$; $n > -3$

80. NO more than 70 crates of oranges

Unit I

Cumulative Test

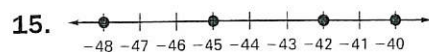
1. 25 2. 9 3. 3 4. 147 5. Nine squared;

$9 \cdot 9 = 81$ 6. Two to the fifth power;

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 32$ 7. 16 8. 6 9. 3

10. 41 11. 40; -40 12. 151; 151 13. 2; 2

14. 925; -925



-48, -45, -42, -40

