Name _____ Date _____

CHAPTER 6

Chapter Test C

For use after Chapter 6

Solve the inequality, if possible.

1. $x + 5.8 \leq 4.6$

2. $x - \frac{3}{8} < \frac{1}{4}$

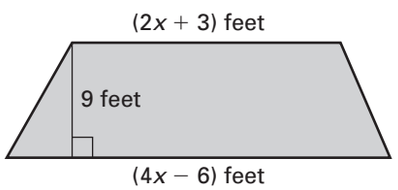
3. $-\frac{4}{7}x \geq -12$

4. $6(x - 2) > 3(2x - 5)$

5. $4x > 0.2(50 + 20x)$

6. $3(3 - 2x) > 5x - 6 + 2x$

7. Write and solve an inequality to find the possible values of x if the minimum area of the trapezoid is to be at least 45 square feet.



Translate the verbal sentence into an inequality. Then solve the inequality.

8. The difference of 11 and c is at least -23.

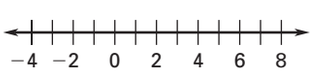
9. The product of -3.9 and w is at most 19.5.

10. Three times the product of the difference of $3x$ and 1 is greater than the sum of $3x$ and 4.

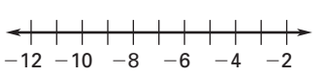
11. The quotient of the difference of 5 times a number n and 9 and 2 is greater than -2 and less than or equal to 3.

Solve the inequality, if possible. Graph your solution.

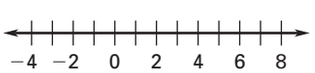
12. $1 \leq 3 + \frac{2}{3}x < 7$



13. $-\frac{2}{3}x < 4$ *and* $\frac{3}{4}x < -6$



14. $\frac{1}{2}(x + 1) > 3$ *or* $0 < -2 - x$



15. $3x - 9 \leq 9$ *or* $4 - x \leq 3$

16. Your scores on four algebra tests are 93, 69, 89, and 97. After the next test, you want your average to be between 84 and 92, which is a B average. What are the possible scores for your next test?

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

_____

9. _____

_____

10. _____

_____

11. _____

_____

12. _____

See left.

13. _____

See left.

14. _____

See left.

15. _____

See left.

16. _____

Name _____ Date _____

CHAPTER 6

Chapter Test C *continued*

For use after Chapter 6

Solve the equation, if possible.

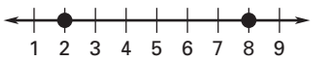
17. $-3\left|2 - \frac{5}{4}x\right| = 18$

18. $2|3x + 8| - 13 = -5$

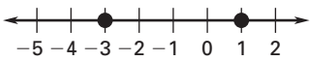
19. $\left|\frac{9 - 4x}{2}\right| = 3$

Write an absolute value equation represented by the graph.

20.

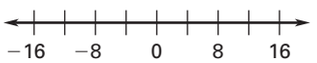


21.

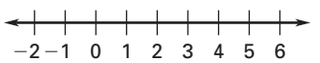


Solve the inequality. Graph your solution.

22. $-3\left|4 - \frac{1}{2}x\right| \leq -12$



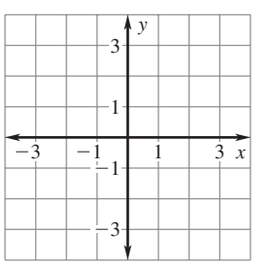
23. $\frac{5}{3}|7 - 4x| - 9 > 6$



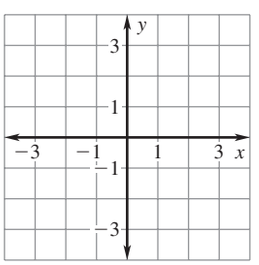
24. For your chemistry experiment, you are trying to keep the water temperature at 35°C. For the experiment to work properly, the actual temperature can vary by as much as 1%. Write and solve an absolute value inequality to find the acceptable temperatures of the water.

Graph the inequality.

25. $4(x - 2) < y - 5$



26. $2x - 3(y + 1) \geq y - (4 - x)$

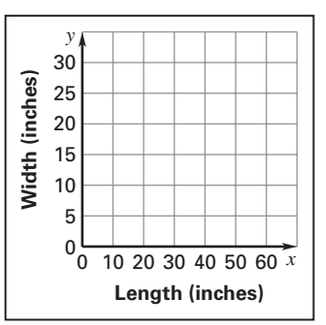


In Exercises 27 and 28, use the following information.

To send a box priority mail by the United States Postal Service, the sum of the length x (in inches) and twice the sum of the width y (in inches) and the height of the box must not exceed 108 inches.

27. Write and graph an inequality that describes the possible lengths and widths of a 24-inch high box that can be sent by priority mail.

28. Identify and interpret one of the solutions.



Answers

17. _____

18. _____

19. _____

20. _____

21. _____

22. _____

See left.

23. _____

See left.

24. _____

_____

25. See left.

26. See left.

27. _____

See left.

28. _____

_____