Name _____ Date _____

CHAPTER 2

Chapter Test C

For use after Chapter 2

Tell whether the statement is *true* or *false*. If it is false, give a counterexample.

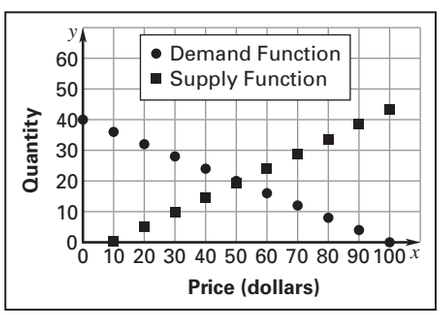
1. If a number is positive, then its absolute value is negative.
2. If a number is a whole number, then the number is an integer.
3. If a number is a real number, then the number is a rational number.
4. A number is always greater than its opposite.

Order the numbers in the list from least to greatest.

5. $-\sqrt{12},\ |3.5|,\ -3\frac{2}{5},\ \sqrt{16},\ -3.48$
6. $-\frac{8}{7},\ -\sqrt{6},\ -\sqrt{1},\ -1\frac{1}{8},\ |2|$

In Exercises 7-10, use the following information.

A market surplus or shortage is the difference of the quantity supplied and the quantity demanded. A positive difference is a surplus, and a negative difference is a shortage. The graph shows the quantities of a type of shoe supplied and demanded.



7. Find the market surplus or shortage when the price is $80.
8. Find the market surplus or shortage when the price is $30.
9. Market equilibrium occurs when the demanded quantity is equal to the supplied quantity. For what price is there market equilibrium?
10. Describe any trends in the surplus or shortage in relationship to the price.

Complete the statement using the given property.

11. $(2x + y) + z =$ __?__; Associative property of addition
12. $-4(6x - 3) =$ __?__; Distributive property
13. $-10y +$ __?__ $= 0$; Inverse property of addition

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

Name _____ Date _____

CHAPTER 2

Chapter Test C *continued*

For use after Chapter 2

Evaluate the expression.

14. $-1.8 + 7.6 + (-3.7)$

15. $-6.3 - (-17.4) - 11.2$

16. $-3\frac{1}{2} + \left(-6\frac{3}{5}\right) + 9\frac{3}{10}$

17. $1.9(-2.5)(3)$

18. $-\frac{1}{2}(-32) \div \left(-\frac{6}{5}\right)$

19. $-\frac{1}{3} \div \frac{5}{3} \cdot (-35)$

20. $\left(-2\frac{1}{3}\right) \cdot \left(-5\frac{2}{5}\right) \div \left(-6\frac{1}{4}\right)$

21. $\left(-\frac{5}{3} - \frac{8}{3}\right) \div \left(-\frac{3}{4} \cdot \frac{8}{9}\right)$

22. Due to depreciation, the value of a new car is decreasing. Its value was \$15,750 in 2005. For the first two years, the average rate of change in value of the car was about −\$4000 per year. For the next five years, the average rate of change in value of the car was about −\$1150 per year. Find the price of the car when it was bought new in 1998.

Simplify the expression.

23. $\frac{-20x - 12}{-12}$

24. $3x(x - 6) + (x - 3)(-8)$

25. $-\frac{2}{3}x(x^2 + 6)$

26. $5xy - 12xy + xy - 6xy + 10xy$

Evaluate the expression.

27. $x^2 - y^3$ when $x = -2$ and $y = -5$

28. $\frac{-3\sqrt{x} - 7}{xy}$ when $x = 9$ and $y = -1$

29. $\frac{\sqrt{x}}{x} - y^3$ when $x = 4$ and $y = -2$

30. $\frac{2x - y}{y^2 - 4}$ when $x = 1$ and $y = -4$

31. The area of a square park in a city is 22,500 square feet. Find the perimeter of the park.

Answers

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

25. _____

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____