Name _____ Class _____ Date _____

Chapter Practice

Chapter 1

For Exercises 1–13, choose the correct letter.

1. Compare the quantities in Column A and Column B.

Column A	Column B
the reciprocal of 2	the opposite of 2

A The quantity in Column A is greater.
B The quantity in Column B is greater.
C The two quantities are equal.
D The relationship cannot be determined on the basis of the information supplied.

2. The total cost for bus tickets for a family equals the number of adults at \$1.00 each plus the number of children at \$.50 each. Which equation could be used to model this?

A $T = 1a + 0.5c$ **B** $c = 1a + 0.5c$
C $T = c(a + 0.5)$ **D** $c = a(1 + 0.5c)$
E $T = 1.5a + c$

3. To simplify $15 + 5(12 \div 4) \cdot 2$, you should first calculate which of the following?

A $15 + 5$ **B** $12 \div 4$
C $5 \cdot 12$ **D** $5 \div 4$
E $4 \cdot 2$

4. Compare the quantities in Column A and Column B.

Column A	Column B
$3 - \left(\frac{2}{3} \cdot 6\right)$	$\left(3 - \frac{2}{3}\right) \cdot 6$

A The quantity in Column A is greater.
B The quantity in Column B is greater.
C The two quantities are equal.
D The relationship cannot be determined on the basis of the information supplied.

5. Evaluate $2(b^2 - 4b) + 3$ for $b = 4$.

A 0 **B** 2
C 8 **D** 216
E none of the above

6. The opposite of -12 is which of the following?

A -21 **B** 12
C $\frac{1}{12}$ **D** $-\frac{1}{12}$
E none of the above

7. Simplify $(-4)^3$.

A -12 **B** 12
C -64 **D** 64
E none of the above

8. Which of the following is equivalent to $x \div y$?

A $\frac{1}{x} - y$ **B** $x \cdot \frac{1}{y}$
C $\frac{y}{x}$ **D** $x - \frac{1}{y}$
E none of the above

9. Which of the following is true?

A $\frac{1}{4} < \frac{1}{3}$ **B** $-\frac{1}{2} > -\frac{1}{4}$
C $-\frac{1}{4} > \frac{1}{3}$ **D** $\frac{1}{2} < -\frac{1}{3}$

10. Simplify $|17.3 - 22.7|$.

A 5.4 **B** 15.4
C –5.4 **D** -15.4
E none of the above

11. Which of the following is an irrational number?

A $\sqrt{2}$ **B** 0.125
C $\frac{1}{3}$ **D** 101
E none of the above

12. The Wagners rented a new release and 2 children's movies. How much did they spend altogether?

Children's	$0.99
New Releases	$2.49
Other	$1.99

A $3.97 **B** $5.47

C $4.47 **D** $6.47

13. If x is a real number, then which statement about $3x$ must be true?

A $3x$ is three units more than x.

B $3x$ is greater than x.

C $3x$ is a real number.

D $3x$ cannot equal zero.

For Exercises 14–21, write your answer.

14. Evaluate $6a + 12 \div 3a$ for $a = 2$.

15. Draw a scatter plot for the price of a t-shirt and the number of t-shirts a store might sell each day. Have the x-axis range from $0 to $50 in increments of $5, and the y-axis range from 0 to 100.

16. Evaluate $\frac{d^3}{d + 4}$ for $d = 4$.

17. Simplify $-17 - (-26)$.

18. Evaluate $\frac{-a}{3} + 2ab$ for $a = -6$ and $b = 4$.

19. If you increase the product of -4 and -3 by 15 and divide the result by the product of 3 and -1, what additional amount do you need to add to the quotient to have a final sum of 0?

20. Estimate the cost of the items in the grocery list to the nearest dollar. Explain how you used the Commutative and Associative Properties to make your estimate.

Item	Price
milk	$1.29
eggs	$1.09
juice	$2.69
bread	$1.49
cookies	$2.09
cheese	$1.89
crackers	$1.49
applesauce	$1.19
hot dogs	$2.89
pickles	$1.79

21.

Years Employed	Salary ($)
3	24,000
3	25,000
4	26,000
5	28,000
5	29,000
7	30,000
9	33,000
10	34,000
12	40,000

a. Using the data in the table, draw a scatter plot.

b. What type of correlation is there between the two data sets?

c. Predict the salary of an employee who has worked 6 yr.