Name KEY 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

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 OR B

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?

B

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.

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 $b = 4$.

E

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

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

B

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

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

C

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

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

B

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

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

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

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

KEY

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

C

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?

C

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 $a = 2$. 14

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. Neg. Corr.

16. Evaluate $\frac{d^3}{d+4}$ for $d = 4$. 8

17. Simplify $-17 - (-26)$. 9

18. Evaluate $\frac{-a}{3} + 2ab$ for $a = -6$ and $b = 4$. -46

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?

9

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

\$17.00

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? Pos. Correlation

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

\$29,000