Name _____ Class _____ Date _____

Chapter Practice

Chapter 2

For Exercises 1–14, choose the correct letter.

1. Which of the following equations is not equivalent to the others?

A $\frac{x}{4} = 3$ **B** $4x = 12$

C $\frac{4x}{4} = 12$ **D** $12 = x$

E $\frac{4x}{4} = 3 \cdot 4$

2. If $2\left(\frac{x}{2} - 1\right) = 4$ and $3(y - 1) = 2 + 2y$, which of the following is true?

A $x = 3$ and $y = 3$ **B** $x = 5$ and $y = 5$

C $x = 6$ and $y = 1$ **D** $x = 3$ and $y = 1$

E $x = 6$ and $y = 5$

3. Half the money collected at a show is donated to charity. Tickets cost \$100 a pair. The charity received \$3500. How many tickets were sold?

A 1400 **B** 700

C 350 **D** 70

E None of the above

4. Which of the following is a solution for the equation $\frac{x}{2} + \frac{2x}{3} = 2$?

A $\frac{10}{3}$ **B** $\frac{3}{2}$

C $\frac{12}{7}$ **D** $\frac{2}{7}$

E $\frac{12}{5}$

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

Column A	Column B
the value of x if $2x - 1 = 7$	the value of x if $16 = \frac{64}{x}$

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.

6. Which of the following is equivalent to $5p - 4 = 3p + 6$?

A $8p = 10$

B $5p + 3p = 4 + 6$

C $6 - 4 = 3p + 5p$

D $5p - 4 = \frac{3p + 6}{3}$

E none of the above

7. Which of the following equations is *not* equivalent to the others?

A $\frac{m + n}{p} = q$ **B** $m + n = qp$

C $n = \frac{qp}{m}$ **D** $m = pq - n$

E $p = \frac{n + m}{q}$

8. Compare the quantity of possible solutions to the equations in Column A and Column B.

Column A	Column B
$8c + 17 = 12c + 32 - 4c$	$9c - 4 = -3 + 6c + 12$

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.

9. Compare the values of m in Column A and Column B.

Column A	Column B
$a = b + dm$	$m = \frac{a - b}{d}$

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.

10. The mode of a set of ten numbers is 4. The median is 9. Which of the following *cannot* be the mean?

A 4 **B** 9
C 12 **D** 13
E 20

11. What is the solution to the equation $3(x + 2) = -12$?

A -2 **B** 2
C 6 **D** -6

12. Which equation has the same solution as $4(a - 2) - a = -14$?

A $\frac{1}{2}(x + 1) = 2$

B $\frac{1}{3}h + \frac{1}{6} = -\frac{1}{2}$

C $4y + 7 = 15$

D $x + 8 - 3x = 4$

13. If $4c - 3 = -31$, what is the value of $-2c + 11$?

A -7 **B** 25
C -3 **D** 27
E -9

14. Which equations have the same solution?

I. $6(x + 5) - 2x = -6$
II. $4 + 2(m + 3) = 28$
III. $\frac{m}{4} = -2.25$

A I and II **B** I and III
C II and III **D** none of the above

For Exercises 15–22, write your answer.

15. Explain why you cannot find the value of this expression.

$$\frac{(a - a)(a + a)}{(a - a)}$$

16. Draw a stem-and-leaf plot for this set of data: 21, 22, 26, 22, 21, 27, 23, 22, 21, 22, 26.

17. Find b if $\frac{3b}{4} = 12$.

18. Find d if $2(d - 4) = -2d + 8$.

19. What is the value of $6x$ if $3(x - 4) + x = -2$?

20. Find m if $-4 = -m + 9$.

21. Describe a situation that you can model with the equation $2(5 + w) = 42$.

22. An interviewer asked 20 people at a mall "How many pets are in your home?" Here are their responses:

1, 2, 0, 1, 3, 2, 1, 0, 2, 4,
0, 3, 0, 7, 1, 4, 2, 6, 0, 3

Find the mean, median, and mode of the data.