Chapter Test   Form B

Chapter 1

Use an equation to model the relationship in each table.

1.

Number of Items	Total Cost
1	$3.45
2	$6.90
3	$10.35
4	$13.80

2.

Games Played	Games Remaining
10	152
50	112
100	62
162	0

Simplify.

3. $-3 + 8 \div 2 + 7$

4. $-23.8 + 19.4$

5. $-7(2) - (-12)$

6. $-63 \div 9$

Evaluate each expression.

7. $3x - 9$ for $x = 3$

8. $y^2 \div z$ for $y = -14$ and $z = 4$

9. $|m| - |-2n|$ for $m = -11$ and $n = 8$

10. $-2(s - 6t)$ for $s = 2.9$ and $t = -3.8$

11. $\frac{a}{b}$ for $a = -\frac{3}{4}$ and $b = \frac{7}{8}$

12. $\frac{4 + 2d}{-2}$ for $d = -7$

Find the sum or difference.

13. $\begin{bmatrix} -2 & 13 \\ 8 & -6 \end{bmatrix} - \begin{bmatrix} 8 & -17 \\ -8 & -4 \end{bmatrix}$

14. $\begin{bmatrix} 1.2 & -6.8 \\ 0.4 & 0 \\ 2.3 & -8 \end{bmatrix} + \begin{bmatrix} 2.5 & 3.6 \\ -2.7 & -0.1 \\ 2.4 & -7.3 \end{bmatrix}$

Is each statement *true* or *false*? If the statement is false, give a counterexample.

15. All rational numbers are real numbers.

16. The opposite of the absolute value of a positive number is positive.

Simplify each expression.

17. $(18 - 36b)\left(-\frac{2}{3}\right)$

18. $-\frac{1}{4}(12 - 4b)$

Write an expression for each phrase.

19. 5 more than the product of 4 and m

20. the sum of a number and 5 times the difference of 6 and the number

Simplify each expression. Justify each step.

21. $-7x + \frac{1}{4}(4x - 4)$

22. $(2^3 - 3^2)(4^2 - 4^3)$

Chapter Test (continued)   Form B

Chapter 1

Simplify each expression.

23. $-6\frac{2}{3} - 5\frac{2}{3}$

24. $-4.7 - 2.3 - 3.8$

25. Critical Thinking Explain the error in the work shown below. Compute the correct answer.

$$5 + 4 \times 3 = 9 \times 3$$
$$= 27$$

26. Open-Ended Choose five different integers so that the average will be -11.

In which quadrant or on which axis would you find each point?

27. $(0, 3)$

28. $(-2, 2)$

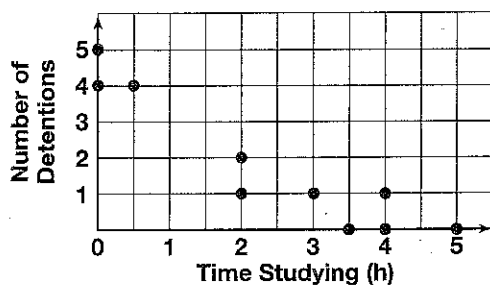**29. Geometry** Find the area of the rectangle whose vertices have coordinates $(-2, -2), (3, -2), (3, 4)$ and $(-2, 4)$.

30. A checking account had the following activity over a 2-day period: a withdrawal of $35.47, a deposit of $92.63, and a service charge of $2.13. If the balance after this activity was $174.13, what was the balance before the activity?

31. A football team begins a possession on its own 27-yard line. Four plays result in the following: gain of 6, loss of 12, gain of 2, loss of 7. On what yard line is the ball after the fourth play?

32. A stereo cost $479.69 plus state and local taxes totaling 7.2%. Find the total cost of the stereo.

Use the scatter plot below for Exercises 33–34.

33. Is there a positive correlation, negative correlation, or no correlation between hours spent studying and the number of school detentions received?

34. What is the approximate number of hours spent studying by someone who has received 3 detentions?

35. Writing Determine which is the lesser quantity and explain why it is less.

$-2\frac{5}{11}, -2.45$