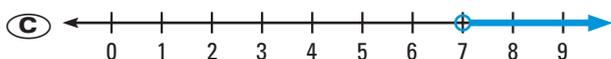


# Chapter Standardized Test

**TEST-TAKING STRATEGY** Work as fast as you can through the easier problems, but not so fast that you are careless.

1. **MULTIPLE CHOICE** Which graph represents the solution of  $x + 10 < 17$ ?



2. **MULTIPLE CHOICE** Describe the solution of the inequality  $x + 3 \leq 7$ .

- (A) All real numbers less than 4
- (B) All real numbers less than or equal to 10
- (C) All real numbers less than or equal to 4
- (D) All real numbers less than or equal to  $-4$
- (E) None of these

3. **MULTIPLE CHOICE** Which inequality is equivalent to  $2 - 3x \geq -4$ ?

- (A)  $x \geq 2$
- (B)  $x \leq 2$
- (C)  $x \leq -\frac{2}{3}$
- (D)  $x \geq -2$
- (E) None of these

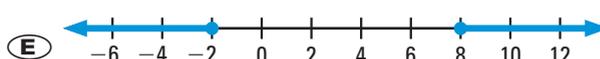
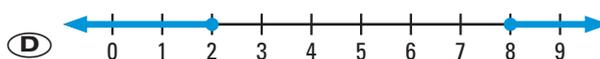
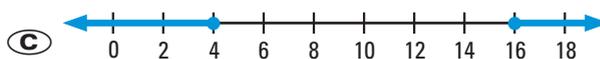
4. **MULTIPLE CHOICE** Describe the solution of the compound inequality  $-3x + 2 > 11$  or  $5x + 1 > 6$ .

- (A) All real numbers less than  $-3$  or greater than  $1$
- (B) All real numbers greater than  $3$  or less than  $1$
- (C) All real numbers less than  $3$  or greater than  $-1$
- (D) All real numbers less than  $-3$  and greater than  $1$
- (E) None of these

5. **MULTIPLE CHOICE** For which values of  $x$  is the inequality  $5(3x + 4) \leq 5x - 10$  true?

- (A)  $x \geq -3$
- (B)  $x \leq -3$
- (C)  $x \leq -1$
- (D)  $x \leq 1$
- (E)  $x \leq 3$

6. **MULTIPLE CHOICE** Which graph represents the solution of  $|2x - 10| \geq 6$ ?



7. **MULTIPLE CHOICE** Which numbers are solutions to the absolute-value equation  $|x - 7| + 5 = 17$ ?

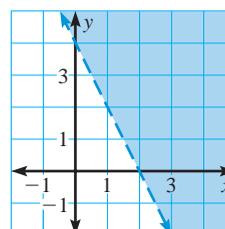
- (A) 5 and  $-19$
- (B) 5 and  $-5$
- (C) 12 and  $-5$
- (D) 19 and  $-19$
- (E) 19 and  $-5$

8. **MULTIPLE CHOICE** Which point is *not* a solution of  $y < x + 5$ ?

- (A)  $(4, -4)$
- (B)  $(1, 4)$
- (C)  $(-1, 4)$
- (D)  $(-3, 1)$
- (E)  $(4, 6)$

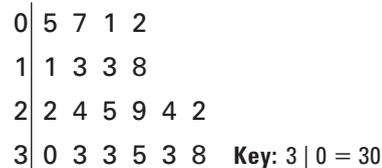
9. **MULTIPLE CHOICE** Choose the inequality whose solution is shown in the graph.

- (A)  $2x + y < 4$
- (B)  $2x + y \geq 4$
- (C)  $2x + y > 4$
- (D)  $y - 2x > 4$
- (E)  $y - 2x \leq 4$



10. **MULTIPLE CHOICE** The stem-and-leaf plot shows the ages of 20 people. What percent of people are under 20 years old?

- (A) 7% (B) 8% (C) 10% (D) 20% (E) 40%



11. **MULTIPLE CHOICE** What is the mean of the collection of numbers: 25, 29, 33, 38, 40, 45, 51, 53, 66, 73?

- (A) 40 (B) 42.5 (C) 45 (D) 45.3 (E) 73

12. **MULTIPLE CHOICE** Which set of numbers is represented by the box-and-whisker plot?



- (A) 20, 24, 15, 20, 25, 18, 19 (B) 19, 18, 15, 23, 25, 28, 30  
 (C) 24, 22, 18, 16, 29, 28, 18, 20, 21, 20, 19 (D) 25, 23, 17, 15, 19, 21, 28, 28, 30, 26  
 (E) 20, 18, 14, 13, 22, 26, 22, 25, 29

**QUANTITATIVE COMPARISON** In Exercises 13 and 14, choose the statement below that is true about the given numbers.

- (A) The number in column A is greater.  
 (B) The number in column B is greater.  
 (C) The two numbers are equal.  
 (D) The relationship cannot be determined from the given information.

Column A	Column B
13. The mean of 2, 3, 4, 5, 6	The median of 2, 3, 4, 5, 6
14. $ a + 2 $	$ a - 2 $

15. **MULTI-STEP PROBLEM** You own a printing shop and order paper each week to meet your customers' printing needs. Company A charges \$4.50 for a ream of 500 sheets of paper plus a \$25 delivery fee for each order. Company B charges only \$4.00 for a ream but charges a \$75 delivery fee for each order.

- a. Let  $x$  represent the number of reams of paper you purchase. Write an expression that represents the total cost of purchasing paper from Company A. Write an expression that represents the total cost of purchasing paper from Company B.  
 b. Choose two different amounts of paper between 50 reams and 150 reams that you could purchase. Calculate the charges from each supplier.  
 c. *Writing* Draw a graph to show the costs of ordering up to 200 reams of paper from each supplier. Explain how to use the graph to determine which company charges the lower price for the same order.  
 d. Write an inequality that represents orders for which Company A offers the lower price. Write an inequality that represents orders for which Company B offers the lower price.