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## Chapter 1 Test Form A

Translate each statement into symbols. Let  $x$  represent the unknown number if needed.

1. Negative eight is greater than negative twelve. 1. \_\_\_\_\_
2. The absolute value of negative three is greater than two. 2. \_\_\_\_\_
3. Tell which set of numbers  $-3$  belongs to: whole numbers, integers, rational numbers, irrational numbers, real numbers 3. \_\_\_\_\_
4. Insert  $<$ ,  $>$ , or  $=$  to make a true statement: 4.  $|-12|$  \_\_\_\_\_ 6

Simplify.

5.  $-14 + 3$  5. \_\_\_\_\_
6.  $8 + (-12)$  6. \_\_\_\_\_
7.  $(-6)(-3)$  7. \_\_\_\_\_
8.  $(-2)^3$  8. \_\_\_\_\_
9.  $\frac{1}{4} + \frac{2}{3}$  9. \_\_\_\_\_
10.  $-\frac{1}{2} \div \frac{1}{4}$  10. \_\_\_\_\_
11.  $\frac{3^2}{18}$  11. \_\_\_\_\_
12.  $6 - 8(2 - 4)$  12. \_\_\_\_\_
13.  $\frac{3+6}{24-6}$  13. \_\_\_\_\_
14.  $6 - 2^2 + 8$  14. \_\_\_\_\_
15.  $\frac{-15 + 2 \cdot 5}{24 - 6}$  15. \_\_\_\_\_

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**Chapter 1 Test Form A cont'd**

Evaluate each expression for the values given.

16.  $2x - y$  when  $x = 3$  and  $y = -2$       16. \_\_\_\_\_

17.  $3x - 2y$  when  $x = -3$  and  $y = -4$       17. \_\_\_\_\_

18.  $x^2 - 2y$  when  $x = -2$  and  $y = -3$       18. \_\_\_\_\_

Name the property illustrated.

19.  $2 \cdot (3 \cdot x) = (2 \cdot 3) \cdot x$       19. \_\_\_\_\_

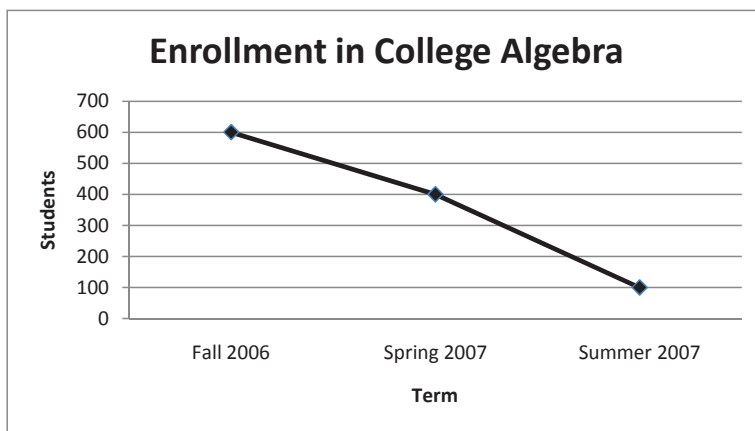
20.  $3 \cdot 6 = 6 \cdot 3$       20. \_\_\_\_\_

21. Find the opposite of  $-6$ .      21. \_\_\_\_\_

22. Find the reciprocal of  $\frac{1}{4}$ .      22. \_\_\_\_\_

23. A football team gained 6 yards, lost 3 yards, and gained 4 yards on one series of downs. What was the total gain or loss?      23. \_\_\_\_\_

Use the table to answer the following questions.



24. How many students were enrolled in Fall 2006?      24. \_\_\_\_\_

25. Find the decrease in enrollment from Fall 2006 to Spring 2007.      25. \_\_\_\_\_

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## Chapter 2 Test Form A

Simplify each of the following expressions.

1.  $6x - 8 - 3x + 4$  1. \_\_\_\_\_
2.  $6x + 2 - 5.2x - 7.3$  2. \_\_\_\_\_
3.  $2(x - 3) + 3(x + 4)$  3. \_\_\_\_\_
4. Subtract  $-2x + 4$  from  $7x - 3$ . 4. \_\_\_\_\_

Solve each of the following.

5.  $-5x = -25$  5. \_\_\_\_\_
6.  $\frac{2}{3}x = 18$  6. \_\_\_\_\_
7.  $5x - 3 = 6x$  7. \_\_\_\_\_
8.  $7x - 3 + 8 = 6x$  8. \_\_\_\_\_
9.  $-2(x + 3) = 3(x - 7)$  9. \_\_\_\_\_
10.  $\frac{2}{3} - x + 5x = \frac{1}{2}x$  10. \_\_\_\_\_
11.  $-0.2(3x - 8) = 1.6 + 2x$  11. \_\_\_\_\_
12.  $3(x - 5) = 2(x + 5) + x$  12. \_\_\_\_\_
13.  $4(3 - 6x) = -2(x + 5)$  13. \_\_\_\_\_
14. The sum of two consecutive integers is 135.  
Find the two integers. 14. \_\_\_\_\_
15. A mechanic charges \$50 an hour plus parts.  
If a bill was \$450 that included \$150 in parts,  
how many hours did the job take? 15. \_\_\_\_\_

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**Chapter 2 Test Form A cont'd**

16. A lab has a 20% acid solution and a 50% acid solution. How many liters of each are required to obtain 600 liters of a 30% acid solution? 16. \_\_\_\_\_
17. Two trains leave Chicago at the same time traveling in opposite directions. One is going 60 miles per hour and the other is going 65 miles per hour. How long before they are 375 miles apart? 17. \_\_\_\_\_
18. Substitute the given values into the formula and solve for the unknown variable. 18. \_\_\_\_\_  
 $V = \frac{1}{3}\pi r^2 h$ ;  $\pi = 3.14$ ,  $V = 56.62$ ,  $r = 3$
19. Solve the formula for the indicated variable. 19. \_\_\_\_\_  
 $P = 2a + 2b$  for  $b$
20. Solve the formula for the indicated variable. 20. \_\_\_\_\_  
 $A = lwh$  for  $h$ .

Solve the inequalities.

21.  $3 - x \leq 2x - 7$  21. \_\_\_\_\_
22.  $\frac{2(3-x)}{4} \leq 10$  22. \_\_\_\_\_
23.  $5 - 3x \leq -10$  23. \_\_\_\_\_
24.  $8 < x - 5 < 21$  24. \_\_\_\_\_
25.  $-5 < 2x + 7 \leq 13$  25. \_\_\_\_\_

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**Test 1 – A**

1.  $-8 > -12$
2.  $|-3| > 2$
3. integer, rational number, real number
4.  $>$
5.  $-11$
6.  $-4$
7. 18
8.  $-8$
9.  $\frac{11}{12}$
10.  $-2$
11.  $\frac{1}{2}$
12. 22
13.  $\frac{1}{2}$
14. 10
15.  $-\frac{5}{18}$
16. 8
17.  $-1$
18. 10
19. Associative property of multiplication
20. Commutative property of multiplication
21. 6
22. 4
23. gain 7 yards
24. 600
25. 200

**Test 2 – A**

1.  $3x - 4$
  2.  $0.8x - 5.3$
  3.  $5x + 6$
  4.  $9x - 7$
  5. 5
  6. 27
  7.  $-3$
  8.  $-5$
  9. 3
  10.  $-\frac{4}{21}$
  11. 0
  12. No solution
  13. 1
  14. 67, 68
  15. 6 hours
  16. 400 liters of 20%,  
200 liters of 50%
  17. 3 hours
  18. 533.3604
  19.  $b = \frac{P - 2a}{2}$
  20.  $h = \frac{A}{lw}$
  21.  $x \geq \frac{10}{3}$
  22.  $x \geq -17$
  23.  $x \geq 5$
  24.  $13 < x < 26$
  25.  $-6 < x \leq 3$
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