

**Basic Algebra Skills Evaluation 2011 (for Geometry and Algebra 2)**

**NO CALCULATOR** may be used for problems 1-6.

**Simplify the expression.**

1.  $7 - 10 + 2$

2.  $-9 + 6$

3.  $-1 - (-3)$

4.  $(-9)(9)$

5.  $-12 \div (-2)$

6.  $(-2)^5$

7.  $\frac{n^{14}}{n^9}$

8.  $(-1)(9 - c)$

9.  $2k^8 \cdot 3k^3$

10.  $(k^2)^4$

11. Evaluate  $u + xy$ , for  $u = 6$ ,  $x = 2$ , and  $y = 7$ .

**Evaluate.**

12.  $3x^2 - 4$  for  $x = -5$

**Use the Distributive Property to multiply.**

13.  $5(2t - 5)$

**Solve the equation.**

14.  $-7b = 21$

15.  $2x - 26 = 10$

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Solve each equation, showing your work, and circle your answer.

16.  $18 = -d + 12$

17.  $4(y - 2) = 16$

18.  $5x - 5 = 3x - 9$

Solve the proportion.

19.  $\frac{2}{10} = \frac{11}{x}$

Solve the inequality. Then graph your solution.

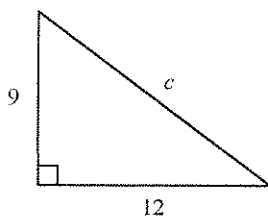
20.  $c - 3 > 6$

21.  $\frac{x}{4} \geq -6$

22.  $-2w < -18$

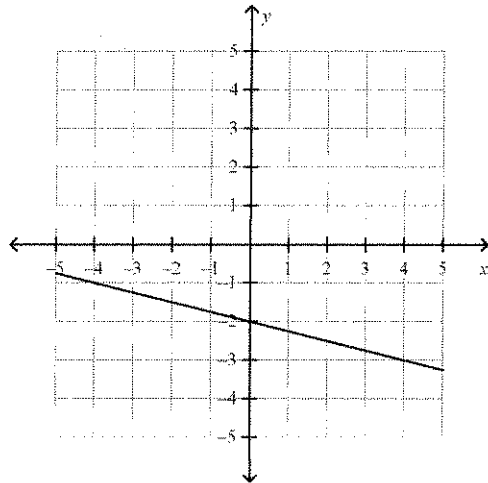
Find the length of the missing side.

23.



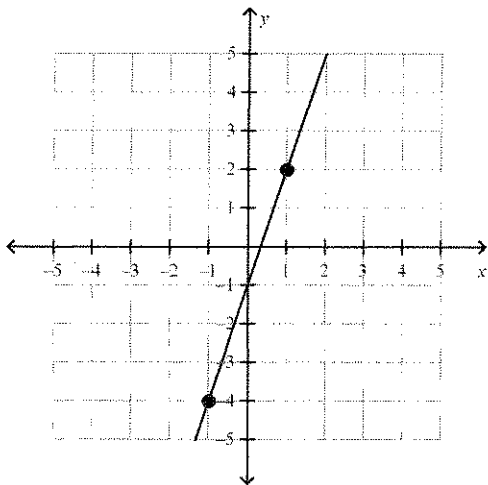
Find the slope of the line.

24.



Write the slope-intercept form of the equation for the line.

25.



Find the slope and  $y$ -intercept of the line.

26.  $y = \frac{4}{3}x - 3$

27. Use the slope and  $y$ -intercept to graph the equation.

$$y = \frac{3}{4}x - 3$$

Find the slope of the line that passes through the pair of points.

28.  $(1, 7), (10, 1)$

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**Simplify the difference.**

29.  $(4w^2 - 4w - 8) - (2w^2 + 3w - 6)$

**Simplify the product using FOIL.**

30.  $(5x - 7)(2x + 6)$

**Find the square.**

31.  $(2m + 1)^2$

**Factor the expression.**

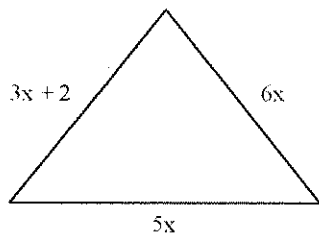
32.  $d^2 - 5d + 6$

33.  $x^2 - x - 42$

**Simplify the product.**

34.  $2n(n^2 + 3n + 4)$

35. Write the perimeter of the figure.



not to scale