

## CH 9 REVIEW QUESTIONS

Use Graph Paper to Show Work.

Circle Answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Per: \_\_\_\_\_

Simplify.

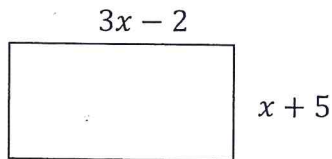
1.  $(-4x^2 + 9x - 12) + (3x^2 - 4x - 8)$

2.  $(2x + 4)(x^2 - x + 1)$

3.  $(13x^2 - 12x - 5) - (-4x^2 + 11x - 10)$

4.  $(x - 7)^2$

5. Write a simplified expression for the area and perimeter of the rectangle.



Area: \_\_\_\_\_

Perimeter: \_\_\_\_\_

6. If the area of the figure in #5 is 176 sq cm, find the dimensions of the rectangle.

Factor completely.

7.  $9x^2 - 36x + 36$

8.  $x^2 + 49$

9.  $4x^3 + 16x^2 + 20x$

10.  $8x^3 - 50x$

Solve for x.

11.  $x^2 + 3x - 13 = -9$

12.  $x^2 + 5x + 6 = x^2 + 7x - 8$

13.  $x(x - 8) = -2(x + 4)$

14.  $5x^2 = 15x$

15.  $5x^2 + 4x - 1 = 0$

16.  $(2x + 8)(3x - 6) = 0$

17. Write a quadratic equation in standard form with integer coefficients that has  $\frac{1}{2}$  and  $-7$  as solutions.

**(Optional Extra Practice):**

$h = -16t^2 + vt + c$ , where  $h$  is the approximate height (in feet) of an object that is propelled upward,  $t$  is the time in motion (in seconds),  $v$  is the initial upward velocity (in feet per second), and  $c$  is the initial height (in feet).

18. A juggler tosses up bowling pins every 0.5 seconds with an initial velocity of 47 feet per second from a height 5 feet off the ground, and catches them at 2 feet off the ground.

Write an equation to model the height  $h$  of the first bowling pin in terms of  $t$  seconds.

b. How many bowling pins will the juggler have in the air when he catches the first one? Explain.