

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

# Review

## Unit 9 Review – Factoring

Reviews do **NOT** cover all material from the lessons but will hopefully remind you of key points. To be prepared, you must study all packets from Unit 9.

**Factor the following.**

1.  $t^2 - 9t - 36$

2.  $m^2 - 4$

3.  $4x^2 - 8x$

4.  $2p^2 + 3p - 5$

5.  $-6n^2 - 22n - 12$

6.  $d^3 - d^2 - 20d$

**Solve by factoring.**

7.  $x^2 - 7x - 30 = 0$

8.  $0 = 2h^2 + 14h + 24$

9.  $3g^2 - 10g = 8$

10.  $0 = 16b^3 - 36b$

11.  $x^2 + 8x + 2 = -10$

12.  $5m^2 + 20m = 0$

**Find the y- and x-intercepts and SKETCH a graph.**

13.  $y = x^2 + 4x - 5$

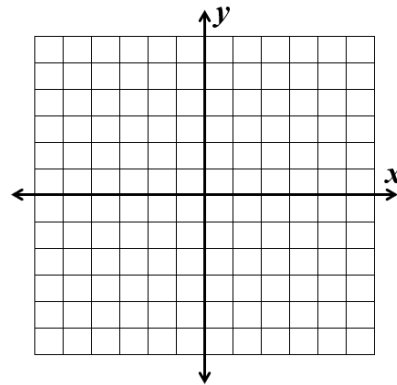
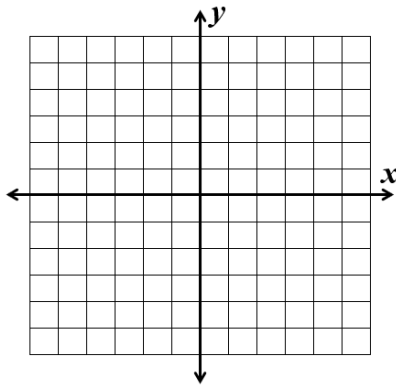
y-intercept:

x-intercepts:

14.  $y = -3x^2 - 11x + 4$

y-intercept:

x-intercepts:



15. The average monthly temperature of an Alaskan town is modeled by the equation  $T(m) = -m^2 + 13m - 22$  where  $m$  stands for month (January = 1, Feb = 2, March = 3, etc...) and  $T$  stands for Temperature in Fahrenheit.

a. Find  $T(5)$ .

b. Use a sentence to explain the meaning of  $T(5)$  in the context of this problem.

c. What month(s) is the average temperature zero?

16. The area of the rectangle shown below is  $24 \text{ feet}^2$ . Find the perimeter of the rectangle.

