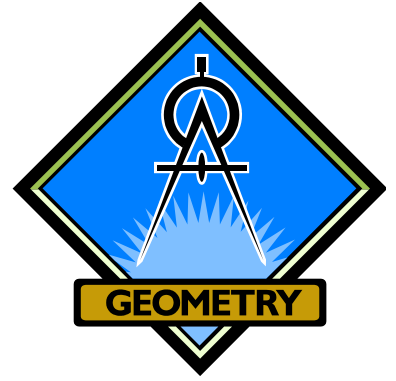


## Geometry CP and Geometry C



### 1) Complete attached worksheets

- a) Practice 5-4: Factoring Polynomials #1 – 26
- b) Practice 6-3: Solving Quadratic Equations by Factoring #1 – 21; 34 – 37

### 2) Format

- a) Show all work and solutions on a separate sheet of paper.
- b) Clearly label each question and its solution.

### 3) Due Date

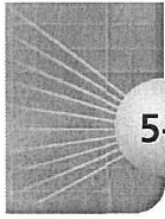
- a) September 6, 2011 or first day class meets

### 4) Grading

- a) Worth three homework grades

### 5) Other

- a) The following websites may be useful for your reference:
  - i) <http://www.themathpage.com/Alg/factoring-trinomials.htm>
  - ii) <http://www.mathwarehouse.com/quadratic/solve-quadratic-equation-by-factoring.php>



NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

## 5-4 Practice

### Factoring Polynomials

Factor completely. If the polynomial is not factorable, write *prime*.

1.  $15a^2b - 10ab^2$

2.  $3st^2 - 9s^3t + 6s^2t^2$

3.  $3x^3y^2 - 2x^2y + 5xy$

4.  $2x^3y - x^2y + 5xy^2 + xy^3$

5.  $21 - 7t + 3r - rt$

6.  $x^2 - xy + 2x - 2y$

7.  $y^2 + 20y + 96$

8.  $4ab + 2a + 6b + 3$

9.  $6n^2 - 11n - 2$

10.  $6x^2 + 7x - 3$

11.  $x^2 - 8x - 8$

12.  $6p^2 - 17p - 45$

13.  $r^3 + 3r^2 - 54r$

14.  $8a^2 + 2a - 6$

15.  $c^2 - 49$

16.  $x^3 + 8$

17.  $16r^2 - 169$

18.  $b^4 - 81$

19.  $8m^3 - 25$

20.  $2t^3 + 32t^2 + 128t$

21.  $5y^5 + 135y^2$

22.  $81x^4 - 16$

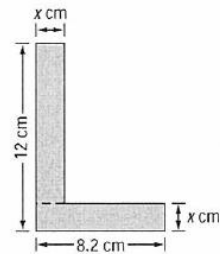
Simplify. Assume that no denominator is equal to 0.

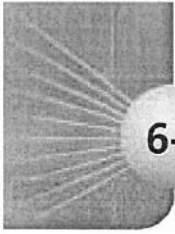
23.  $\frac{x^2 - 16}{x^2 + x - 20}$

24.  $\frac{x^2 - 16x + 64}{x^2 + x - 72}$

25.  $\frac{3x^2 - 27}{x^3 - 27}$

26. **DESIGN** Bobbi Jo is using a software package to create a drawing of a cross section of a brace as shown at the right. Write a simplified, factored expression that represents the area of the cross section of the brace.





NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

## 6-3 Practice

### Solving Quadratic Equations by Factoring

Solve each equation by factoring.

1.  $x^2 - 4x - 12 = 0$

2.  $x^2 - 16x + 64 = 0$

3.  $x^2 - 20x + 100 = 0$

4.  $x^2 - 6x + 8 = 0$

5.  $x^2 + 3x + 2 = 0$

6.  $x^2 - 9x + 14 = 0$

7.  $x^2 - 4x = 0$

8.  $7x^2 = 4x$

9.  $x^2 + 25 = 10x$

10.  $10x^2 = 9x$

11.  $x^2 = 2x + 99$

12.  $x^2 + 12x = -36$

13.  $5x^2 - 35x + 60 = 0$

14.  $36x^2 = 25$

15.  $2x^2 - 8x - 90 = 0$

16.  $3x^2 + 2x - 1 = 0$

17.  $6x^2 = 9x$

18.  $3x^2 + 24x + 45 = 0$

19.  $15x^2 + 19x + 6 = 0$

20.  $3x^2 - 8x = -4$

21.  $6x^2 = 5x + 6$

34. **NUMBER THEORY** Find two consecutive even positive integers whose product is 624.

35. **NUMBER THEORY** Find two consecutive odd positive integers whose product is 323.

36. **GEOMETRY** The length of a rectangle is 2 feet more than its width. Find the dimensions of the rectangle if its area is 63 square feet.

37. **PHOTOGRAPHY** The length and width of a 6-inch by 8-inch photograph are reduced by the same amount to make a new photograph whose area is half that of the original. By how many inches will the dimensions of the photograph have to be reduced?