Red Belt
Home Exercises
Wednesday February 1, 2006

Reading Assignment:

Review Chapter 7 of book 2A on expanding and factoring quadratic equations. Read part of Ch. 11 of book 2B (the purple book that we haven't used yet), sections 11.1 and 11.2 on pages 1-14.

Homework Assignment

Please note that you have three weeks for this assignment so it is somewhat long. You'll need to spread out your work and not wait until the last minute.

1. Book 2A, Chapter 7: Do the Worked Examples under section 7.2 on pages 123 and 124: "Factorization by using perfect squares and difference of two squares".

2. Book 2A, Chapter 7. 7a,b,c; 11a,b.

3. Factor the following expressions. (Example: $x^2 + 2x + 1 = (x+1)^2$.)

   To do these problems, it will be useful for you to remember what you established on the warm-up in class: $(x + a)^2 = x^2 + 2ax + a^2$, $(x - a)^2 = x^2 - 2ax + a^2$, $x(x + a) = x^2 + ax$, $(x + a)(x - a) = x^2 - a^2$, $(x + a)(x + b) = x^2 + (a + b)x + ab$.

   2a. $x^2 + 4x + 4 =$

   2b. $x^2 - 6x + 9 =$

   2c. $x^2 + 4x =$

   2d. $x^2 - 25 =$

   2e. $x^2 + 3x + 2 =$

   2f. $x^2 + 7x + 12 =$

   2g. $x^2 - x - 2 =$

   2h. $x^2 - 5x + 6 =$

4. Make up several polynomials and factor them.

5. For polynomials in #2a-h, set the algebraic expression equal to 0 and solve for x. For example, in #2a: $x^2 + 4x + 4 = 0 \rightarrow (x + 2)^2 = 0 \rightarrow x = -2$.

6. **Linear Graphs.** In Book 2B, Ch. 11. Do the Worked Examples from Sections 11.1 and 11.2, pages 1-14.

7. **Linear Graphs.** Book 2B, Ch. 11, problems 1, 2, 3a, 4a, 5, 7ab, 8ab, 9b, 10ab, 13.