

7.3 DIFFERENCE OF SQUARES page 298-305

A BINOMIAL IN WHICH A SQUARE TERM IS SUBTRACTED FROM ANOTHER SQUARE TERM.

$(a^2 - b^2)$  or  $(x^2 - 16)$

To factor take the square root of each term, then represent as two binomials each with a different sign.

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Factor Each

$(a^2 - b^2)$        $(x^2 - 16)$

$\sqrt{a^2} - \sqrt{b^2}$        $\sqrt{x^2} - \sqrt{16}$

$(a - b)(a + b)$        $(x - 4)(x + 4)$

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Factor

$\sqrt{x^2} - \sqrt{25}$

$(x - 5)(x + 5)$

Check using Multiplication (FOIL)

$(x - 5)(x + 5)$

$x^2 + 5x - 5x - 25$

$x^2 - 25$

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Factor

$\sqrt{9x^2} - \sqrt{100}$       for  $9x^2 = 100$ , remember  $3 \times 3 = 9$  and  $10 \times 10 = 100$

so

$(3x + 10)(3x - 10)$

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Textbook Assignment

Page 302- 304 #'s 1,2,4,5,6,7

$$\sqrt{25x^2 - 36}$$

$$(5x - 6)(5x + 6)$$

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$$\sqrt{4 - x^2}$$

$$(2 + x)(2 - x)$$

$$81x^2 - 100$$

$$(9x + 10)(9x - 10)$$

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