

# Study Guide

## Factoring

- ① GGF
- ② Trinomials (3)
- ③ Special Trinomials (3)
- ④ Dif. of Perfect Squares (2)
- ⑤ Grouping (4)

pg 635 #19-31 odd

$$\textcircled{19} \quad x^2 - 21x + 108 = 0$$

$$(x - 9)(x - 12) = 0$$

$$\boxed{x = 9, 12}$$

$$\textcircled{21} \quad x^2 + 26x = -169$$

$$x^2 + 26x + 169 = 0$$

$$(x + 13)(x + 13) = 0$$

$$x = -13$$

$$3) \quad \overbrace{2x^2 + 5x - 12}$$

$$x^2 + 5x - 24$$

$$\left(x + \frac{8}{2}\right)\left(x - \frac{3}{2}\right)$$

$$(x+4)(2x-3)$$

25

$$\overbrace{4x^2 - 12x + 9}$$

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

$$\left(x - \frac{6}{4}\right)\left(x - \frac{6}{4}\right)$$

$$\left(x - \frac{3}{2}\right)\left(x - \frac{3}{2}\right)$$

$$(2x-3)^2$$

$$\textcircled{27} \quad \overbrace{(6x^2 + 24x + 9)} \\ x^2 + 24x + 144 \\ (x + \frac{12}{16})(x + \frac{12}{16})$$

$$(x + \frac{3}{4})(x + \frac{3}{4}) \\ (4x + 3)^2$$

$$\textcircled{29} \quad -2x^5 - 2x^4 + 4x^3 \\ -2x^3(x^2 + x - 2) \\ -2x^3(x - 1)(x + 2)$$

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$$\textcircled{31} \quad (3x^3 + x^2) + (15x + 5) \\ x^2(3x + 1) + 5(3x + 1) \\ (3x + 1)(x^2 + 5)$$

pg 637# 14-16, 20-43