

Factoring Polynomials 5 - KEY

- 1) $x^2 + 5x + 6 = (x + 2)(x + 3)$
- 2) $x^2 - 4x - 12 = (x - 6)(x + 2)$
- 3) $x^2 - 13x + 36 = (x - 4)(x - 9)$
- 4) $x^2 - 20x + 51 = (x - 3)(x - 17)$
- 5) $x^2 + 4x + 4 = (x + 2)^2$
- 6) $x^2 + 16$ Does Not Factor
- 7) $x^2 - 25 = (x + 5)(x - 5)$
- 8) $x^3 + 8 = (x + 2)(x^2 - 2x + 4)$
- 9) $x^2 + 22x + 72 = (x + 4)(x + 18)$
- 10) $2x^2 - 5x - 12 = (2x + 3)(x - 4)$
- 11) $x^2 - 4x = x(x - 4)$
- 12) $x^2 - 9x - 16$ Does Not Factor
- 13) $x^3 - 4x = x(x + 2)(x - 2)$
- 14) $x^3 + x^2 + 4x + 4 = (x + 1)(x^2 + 4)$
- 15) $x^2 - 6x + 9 = (x - 3)^2$
- 16) $3x^2 - 27 = 3(x - 3)(x + 3)$
- 17) $6x^2 + 17x + 12 = (2x + 3)(3x + 4)$
- 18) $4x^3 - 8x^2 - 60x = 4x(x - 5)(x + 3)$
- 19) $16x^2 - 36 = 4(2x + 3)(2x - 3)$
- 20) $x^2 + 19x + 48 = (x + 3)(x + 16)$
- 21) $x^3 - 2x^2 - x + 2$
 $= (x - 2)(x + 1)(x - 1)$
- 22) $x^2 - 15$ Does Not Factor
- 23) $x^2 + 8xy + 7y^2 = (x + y)(x + 7y)$
- 24) $x^2 - 5x + 6 = (x - 2)(x - 3)$
- 25) $x^3 - 27 = (x - 3)(x^2 + 3x + 9)$
- 26) $4x^2 + 64 = 4(x^2 + 16)$
- 27) $x^2 - 15x - 16 = (x - 16)(x + 1)$
- 28) $x^4 - 13x^2 + 36$
 $= (x - 2)(x + 2)(x - 3)(x + 3)$
- 29) $8x^3 + 125$
 $= (2x + 5)(4x^2 - 10x + 25)$
- 30) $4x^2 + 5x + 1 = (4x + 1)(x + 1)$