Answers (Factoring Polynomials)

(1) $x^2 - 25 = (x - 5)(x + 5)$

(2) $9x^2 - 16 = (3x - 4)(3x + 4)$

(3) $\dfrac{9}{25}x^2 - 49 = (\dfrac{3}{5}x - 7)(\dfrac{3}{5}x + 7)$

(4) $7x^2 - 14x = 7x(x - 2)$

(5) $36y^2 - 121 = (6y - 11)(6y + 11)$

(6) $5k^2 - 20 = 5(k - 2)(k + 2)$

(7) $5x^3 - 20x = 5x(x - 2)(x + 2)$

(8) $15t^5 - 60t^3 = 15t^3(t - 2)(t + 2)$

(9) $9w^2 - 25 = (3w - 5)(3w + 5)$

(10) $5t^5 - 20t^3 = 5t^3(t - 2)(t + 2)$

(11) $x^2 - 8x - 20 = (x - 10)(x + 2)$

(12) $x^2 - x - 20 = (x - 5)(x + 4)$

(13) $x^2 + 21x + 20 = (x + 1)(x + 20)$

(14) $x^2 - 12x + 35 = (x - 5)(x - 7)$

(15) $y^2 - 4y - 21 = (y - 7)(y + 3)$

(16) $y^2 - 5y - 24 = (y - 8)(y + 3)$

(17) $k^2 + 4k - 45 = (k + 9)(k - 5)$

(18) $k^2 + 3k - 40 = (k + 8)(k - 5)$

(19) $w^2 + 2w - 63 = (w + 9)(w - 7)$

(20) $w^2 + 16w + 63 = (w + 7)(w + 9)$

(21) $3x^2 + 8x - 11 = (3x + 11)(x - 1)$

(22) $5k^2 + 3k - 8 = (5k + 8)(k - 1)$

(23) $10y^2 - 3y - 7 = (y - 1)(10y + 7)$

(24) $3y^2 - 8y - 11 = (3y - 11)(y + 1)$

(25) $5k^2 - 3k - 8 = (5k - 8)(k + 1)$

(26) $5y^2 - 3y - 14 = (y - 2)(5y + 7)$

(27) $3y^2 - 5y - 50 = (y - 5)(3y + 10)$

(28) $3x^2 - 4x - 4 = (x - 2)(3x + 2)$

(29) $4x^2 - 5x - 9 = (4x - 9)(x + 1)$

(30) $6x^2 - 5x - 14 = (x - 2)(6x + 7)$

(31) $x^3 + 10x^2 + x + 10 = (x + 10)(x^2 + 1)$

(32) $x^3 - 10x^2 - x + 10 = (x - 10)(x - 1)(x + 1)$

(33) $2x^3 + 12x^2 + 3x + 18 = (x + 6)(2x^2 + 3)$

(34) $2x^3 + 6x^2 - 5x - 15 = (x + 3)(2x^2 - 5)$

(35) $5x^3 - 10x^2 + 3x - 6 = (x - 2)(5x^2 + 3)$