

Algebra I

pg 163

2)	$10t^2 - 17t + 3$	22)	$y^3 - 8y^2 + 8y + 35$
4)	$3r^3 + 4r^2 - 19r + 10$	24)	$6s^3 - 2s^2 - s + 2$
6)	$2a^2 - 11ab + 15b^2$	26)	$4n^3 - 16n^2 + 11n + 10$
8)	$4x^3 - 4x^2y - 5xy^2 - y^3$	30)	$x^3 - 21x + 20$
10)	$n^2 + 12n + 35$	32)	$-6y^3 + 11y^2 + 14y - 24$
12)	$r^2 + 3r - 18$	34)	$-2a^3 - 5a^2 + 11a - 4$
14)	$3a^2 - 11a + 6$	36)	$-4x^3 + 8x^2y - 5xy^2 + y^3$
16)	$10k^2 - 11k - 6$	38)	$\{-13\}$
18)	$9x^2 - 49$	40)	$\{5\}$
20)	$x^3 + 5x^2 + 10x + 12$	42)	$\{\frac{1}{2}\}$

$$2) (5t-1)(2t-3)$$

$$10t^2 - 15t - 2t + 3$$

$$10t^2 - 17t + 3$$

$$6) (2a-5b)(a-3b)$$

$$2a^2 - 6ab - 5ba + 15b^2$$

$$2a^2 - 11ab + 15b^2$$

$$4) (r^2+2r-5)(3r-2)$$

$$3r^3 - 2r^2 + 6r^2 - 4r - 15r + 10$$

$$3r^3 + 4r^2 - 19r + 10$$

$$24) (3s+2)(2s^2-2s+1)$$

$$6s^3 - 6s^2 + 3s + 4s^2 - 4s + 2$$

$$6s^3 - 2s^2 - s + 2$$

$$4) (r^2 + 2r - 5)(3r - 2)$$

$$3r^3 + \underline{6r^2} - \underline{15r} - \underline{2r^2} - \underline{4r} + 10$$

$$3r^3 + 4r^2 - 19r + 10$$

$$20) (x+3)(x^2+2x+4)$$

$$x^3 + \underline{2x^2} + \underline{4x} + \underline{3x^2} + \underline{6x} + 12$$

$$x^3 + 5x^2 + 10x + 12$$

$$10) (n+7)(n+5)$$

$$n^2 + \underline{5n} + \underline{7n} + 35$$

$$n^2 + 12n + 35$$

$$14) (3a-2)(a-3)$$

$$3a^2 - \underline{9a} - \underline{2a} + 6$$

$$3a^2 - 11a + 6$$

$$30) (5+x)(x^2-5x+4)$$

$$\cancel{5x^2} - \underline{25x} + 20 + x^3 - \cancel{5x^2} + \underline{4x}$$

$$x^3 - 21x + 20$$

$$34) (1-2a)(a^2-4+3a)$$

$$\underline{a^2} - 4 + \underline{3a} - \underline{2a^3} + \underline{8a} - \underline{6a^2}$$

$$-2a^3 - 5a^2 + 11a - 4$$

$$38) (x-3)(x+7) - (x+1)(x+5) = 0$$

$$(x^2 + 7x - 3x - 21) - (x^2 + 5x + x + 5) = 0$$

$$(x^2 + 4x - 21) - (x^2 + 6x + 5) = 0$$

$$\underline{x^2} + \underline{4x} - \underline{21} - \underline{x^2} - \underline{6x} - \underline{5} = 0$$

$$-2x - 26 = 0$$

$$-2x - 26 + 26 = 0 + 26$$

$$\frac{-2x}{-2} = \frac{26}{-2}$$

$$\{-13\} \quad x = -13$$

$$40) (3x+5)(2x-3) = (x-1)(6x+5)$$

$$6x^2 - 9x + 10x - 15 = 6x^2 + 5x - 6x - 5$$

$$6x^2 + x - 15 = 6x^2 - x - 5$$

$$\cancel{6x^2} - \cancel{6x^2} + x - 15 = \cancel{6x^2} - \cancel{6x^2} - x - 5$$

$$x - 15 = -x - 5$$

$$x + x - 15 = -x + x - 5$$

{5}

$$2x - 15 = -5$$

$$2x - 15 + 15 = -5 + 15$$

$$\frac{2x}{2} = \frac{10}{2}$$

$$x = 5$$

$$42) (2n-3)(n^2+3n-2) = (n-1)(2n^2+5n-4)$$

$$2n^3 + \underline{6n^2} - \underline{4n} - \underline{3n^2} - \underline{9n} + 6 = 2n^3 + \underline{5n^2} - \underline{4n} - \underline{2n^2} - \underline{5n} + 4$$

$$2n^3 + 3n^2 - 13n + 6 = 2n^3 + 3n^2 - 9n + 4$$

$$\cancel{2n^3} - \cancel{2n^3} + \cancel{3n^2} - \cancel{3n^2} - 13n + 6 = \cancel{2n^3} - \cancel{2n^3} + \cancel{3n^2} - \cancel{3n^2} - 9n + 4$$

$$-13n + 6 = -9n + 4$$

$$-13n + 13n + 6 = -9n + 13n + 4$$

$$\left\{ \frac{1}{2} \right\}$$

$$6 = 4n + 4$$

$$6 - 4 = 4n + 4 - 4$$

$$\frac{2}{4} = \frac{4n}{4}$$

$$\frac{1}{2} = n$$