1- $2x-1+3x^2 = 3x^2+2x-1$ → 2º grau

2- $2x^3+x^2-2x+1 = 2x^3+x^2-2+1$ → 3º grau

3- $1-x^7 = x^7-1$ → 7º grau

4- $x^2-x^4+x-3 = x^4+x^2+x-3$ → 4º grau

5- polinômio

6- monômio

7- polinômio

8- polinômio

9- $(x^2-3x+7)+(3x^2+5x-3) = 4x^2+2x+4$

10- $(-3x^2-5)-(x^2+7x+12) = -3x^2-5+x^2-7x-12$ → $-2x^2-7x-17$

11- $(4x^3-x^2+3x)-(x^3+12x-3) = 4x^3-x^2+3x-x^3-12x+3$ →
$3x^3-x^2-9x+3$

12- $-(y^2+2y-3)-(x^3+12x-3) = -y^2-2y+3-x^3-12x+3$ →
$-x^3-y^2-2y-12x+9$

13- $2x(x^2-x+3) = 2x^3-2x^2+6x$ =

14- $y^2(2y^2+3y-4) = 2y^4+3y^3-4y^2$

15- $-3u(4u-1) = -12u^2+3u$

16 - $-4v(2-3v^3) = 12v^4 - 8v$

17 - $(2-x-3x^2)5x = 15x^3 - 5x^2 + 10x$

18 - $(1-x^2+x^4).(2x) = 2x^5 - 2x^3 + 2x$

19 - $(x-2).(x+5) = x^2 + 5x - 2x - 10 = x^2 - 3x - 10$

20 - $(2x+3).(4x+1) = 8x^2 + 2x + 12x + 3 = 8x^2 + 14x + 3$

21 - $(3x-5).(x+2) = 3x^2 + 6x - 5x + -10 = 3x^2 + x - 10$

22 - $(2x-3).(2x+3) = 4x^2 + 6x - 6x - 12 = 4x^2 - 12$

23 - $(3x-y)(3x+y) = 9x^2 + 3xy - 3xy - y^2 = 9x^2 - y^2$

24 - $(3-5x)^2 = (3-5x).(3-5x) = 9 - 15x - 15x - 25x^2 = -25x^2 + 9$

28 - $(3x+4y)^2 = (3x+4y).(3x+4y) = 9x^2 + 12xy + 12xy + 15y^2$
$9^2 + 24xy + 12y^2$

25 - $(x-1)^3 = (x-1).(x-1).(x-1) = x^3 - 3x^2 + 3x - 1$

27 - $(2u-v)^3 = (2u-v).(2u-u).(2u-u)$ * $u = x$ e $v = y$
$8x^3 - 12x^2y + 6xy^2 - y^3$

28 - $(u+3v)^3 = (u+3v).(u+3v).(u+3v)$: $u = x$ e $u = y$
$x^3 - 9x^2y + 27xy^2 + 9y^3$

29 - $(2x^3-3y)(2x^3+3y) = 4x^6 + 6x^3y - 6x^3y - 9y^2 = 4x^6 - 9y^2$

30 - $(5x^3-1)^2 = (5x^3-1).(5x^3-1) = 25x^6 - 10x^3 + 1$

31- $(x^2-2x+3).(x+4) = x^3+4x^2-2x^2-8x+3x+12 \Rightarrow$
$x^3+4x^2-5x+12$

32- $(x^2+3x-2).(x-3) = x^3-3x^2+3x^2-9x-2x+6$
$x^3-11x+6$

33- $(x^2+x-3).(x^2+x+1) = x^2+x-3$
$\underline{x^2+x+1}$
$x^4+x^3-x^2$
x^3+x^2-x
$-3x^2-3x+3$
$x^4+2x^3-x^2-2x-3$

34- $(2x^2-3x+1).(x^2-x+2) = 2x^2-3x+1$
$2x^4-5x^3+8x^2-7x+2$ $\quad \underline{x^2-x+2}$
$2x^4-2x^3+4x^2$
$-3x^3+3x^2-6x$
x^2-x+2

35- $(x-\sqrt{2}).(x+\sqrt{2}) = x^2+x\sqrt{2}-x\sqrt{2}-\sqrt{2}.\sqrt{2} \Rightarrow$
x^2-2

36- $(x^{\frac{1}{2}}-y^{\frac{1}{2}}).(x^{\frac{1}{2}}+y^{\frac{1}{2}}) = x^{\frac{1}{2}}.x^{\frac{1}{2}}+x^{\frac{1}{2}}.y^{\frac{1}{2}}-y^{\frac{1}{2}}.x^{\frac{1}{2}}+y^{\frac{1}{2}}.y^{\frac{1}{2}} \Rightarrow$
$x-y$

37- $(\sqrt{u}+\sqrt{v}).(\sqrt{u}-\sqrt{v}) = u-v$ (iki terimin farkının)

38- $(x^2-\sqrt{3})(x^2+\sqrt{3}) = x^4+x^2\sqrt{3}-x^2\sqrt{3}-\sqrt{3}.\sqrt{3} \Rightarrow$
x^4-3

39- $(x-2).(x^2+2x+4) = x^3-2x^2+2x^2-4x+4x-8 \Rightarrow$
x^3-8

40- $(x+1).(x^2-x+1) = x^3+x^2-x^2-x+x+1 = x^3+1^3$

41- $5x-15 = 5(x-3)$

42- $5x^3 - 20x = 5x(x^2 - 4)$

43- $yz^3 - 3yz^2 + 2yz = yz(yz^2 - 3z + 2)$

44- $2x(x+3) + 5(x+3) = 2x^2 + 6x + 5x + 15 \Rightarrow 2x^2 + x + 15$
$x(2x+1) + 15$

45- $z^2 - 49 \Rightarrow z^2 - 7^2 \Rightarrow (z+7)(z-7)$

46- $9y^2 - 15 \Rightarrow (3y)^2 - (2^2)^2 \Rightarrow (3y+4)(3y-4)$

47- $64 - 25y^2 \Rightarrow 8^2 - (5y)^2 \Rightarrow (8+5y)(8-5y)$

48- $16 - (x+2)^2 \Rightarrow 4^2 - (x+2)^2 \Rightarrow (4-(x+2))(4+(x+2)) \Rightarrow (2-x)(6+x)$

49- $y^2 + 8y + 15 \Rightarrow (y-4)^2$

50- $36y^2 + 12y + 1 \Rightarrow (6y+1)^2$

51- $4z^2 - 4z + 1 \Rightarrow 2z \cdot 1 \Rightarrow (2z-1)^2$

52- $9z^2 - 24z + 16 \Rightarrow (3z-4)^2$

53- $y^3 - 8 \Rightarrow y^3 - 2^3 \Rightarrow (y-2)(y^2 + 2y + 4)$

54- $z^3 + 64 \Rightarrow z^3 + 4^3 \Rightarrow (z+4)(z^2 - 4z + 15)$

55- $27y^3 - 8 \Rightarrow (3y)^3 - 2^3 \Rightarrow (3y-2)(9y^2 + 6y + 4)$

56- $64z^3 + 27 \Rightarrow (4z)^3 + 3^3 \Rightarrow (4z+3)(16z^2 - 12z + 9)$

57- $(1 - x^3) \Rightarrow (1-x)(1 + x + x^2)$

58- $27 - y^3 \Rightarrow 3^3 - y^3 \Rightarrow (3-y).(9+3y+y^2)$

59- $x^2+9x+14 \Rightarrow (x+2).(x+7)$

60- $y^2-11y+30 \Rightarrow y^2-5y-6y+30 \Rightarrow y(y-5)-6(y-5) \Rightarrow$
$(y-6).(y-5)$

61- $z^2-5z-24 \Rightarrow (x+12)(x-2)$

62- $6x^2+5x+1 \Rightarrow 2x.3x+3x+2x+1 \Rightarrow 3x(2x+1)+(2x+1) \Rightarrow$
$(3x+1).(2x+1)$

63- $14x^2-33x-5 \Rightarrow (2x+1)(7x-5)$

64- $10v^2+23v+12 \Rightarrow 10x^2+15x+8x+12 \Rightarrow 5x(2x+3)+4(2x+3)$
$(5x+4).(2x+3)$

65- $12x^2+11x-15 \Rightarrow 12x^2+20x-9x-15 \Rightarrow 4x(3x+5)-9x-15 \Rightarrow$
$4x(3x+5)-3(3x+5) \Rightarrow (4x-3).(3x+5)$

66- $2x^2-3xy+y^2 = (2x-y)(x-y)$

67- $6x^2+11xy-10y^2 = (2x+5y)(3x-2y)$

68- $15x^2+29xy-14y^2 = 15x^2+35xy-6xy-14y^2 \Rightarrow$
$5x(3x+7y)-6xy-14y^2 \Rightarrow 5x(3x+7y)-2y(3x+7y)$
$\Rightarrow (5x-2y)(3x+7y)$

69- $x^3-4x^2+5x-20: x^2(x-4)+5.(x-4) \Rightarrow (x^2+5).(x-4)$

70- $2x^3-3x^2+2x-3: x^2(2x-3)+1.(2x-3) \Rightarrow (x^2+1)(2x-3)$

71- $x^5 - 3x^4 + x^2 - 3 = x^4(x^2-3) + (x^2-3) = (x^4+1)\cdot(x^2-3)$

72- $x^6 + 2x^4 + x^2 + 2 = x^4(x^2+2) + (x^2+2) = (x^4+1)\cdot(x^2+2)$

73- $2ac + 6ad - bc - 3bd = 2a(c+3d) - b(c-3d) \Rightarrow$
$(2a-b)\cdot(c+3d)$

74- $3uw + 12uz - 2vw - 8vz = 3u(w+4z) - 2v(w-4z)$
$(3u-2v)\cdot(w+4z)$

75- $x^3 + x = x(x^2+1)$

76- $4y^3 - 20y^2 + 25y = y(2y-5)^2$

77- $18y^3 + 48y^2 + 32y = 3y^3 + 8y^2 + 5y = y(3y^2 + 8y + 5)$

78- $2x^3 - 16x^2 + 14x = 2x(x^2 - 8x + 7) = 2x(x^2 - x - 7 + 7) =$
$2x(x(x-1) - 7x + 7) = 2x(x(x-1) - 7(x-1)) = 2x(x-1)\cdot(x-7)$

79- $16y - y^3 = y\cdot(16 - x^2) = y(4^2 - x^2) = (4-x)\cdot(4+x)$

80- $3x^4 + 24x = 3x\cdot(x^3 + 2^3) = 3x(x+2)(x^2 + 2x + 4)$

81- $5y + 3y^2 - 2y^3 = y(-2y^2 + 3y + 5) = x\cdot(2x-5)\cdot(x+1)$

82- $8z^4 - z = z\cdot(2z^3 - 1) = z\cdot(2x-1)(4x^2 + 2x + 1)$

83- $2(5x+1)^2 - 18 = 50x^2 + 2x - 16 = 2(25x^2 + x - 8)$

84- $5(2x-3)^2 - 20 = 20x^2 - 30x + 25 = 5(4x^2 - 5x + 5)$

85. $6x^2+22x-20 = 2(2x+5)(3x-2)$

86. $3x^2+13xy-10y^2 = 3x(x+5y)-2y(x+5y) = (x+5y)(3x-2y)$

87. $2ac-2bd+4ad-bc = 2ac-bc-2bd+4ad$
$c(2a-b)-2d(2a-b) = (2d+c)(2a-b)$

88. $6ac-2bd+4bc-3ad = (3a+2b)(2c-d)$

89. $x^3-3x^2-4x+12 = (x-3)(x-2)(x+2)$

90. $x^4-4x^3-x^2+4x = x(x-4)(x-1)(x+1)$

91. Exemplo 11 b??