$p(x) = (x^2 - 9)(x^2 + x - 2)$

$0 = (x+3)(x-3)(x+2)(x-1)$

$p(x) = 2x^3 + 4x^2 - 6x$

$a \cdot b = 2 \cdot -6 = -12$

$a + b = 4$

$6 \cdot -2 = -12$

$6 - 2 = 4$

$2x^3 + 6x^2 - 2x^2 - 6x$

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

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

$2x(x-1)(x+3)$

$x = 0,\ x = 1,\ x = -3$

$p(x) = 2x^3 - x^2 - 8x + 4$

$(2x^3 - x^2) + (-8x + 4)$

$x^2(2x-1) - 4(2x-1)$

$(x^2 - 4)(2x-1)$

$(x+2)(x-2)(2x-1)$

$2x - 1 = 0$

$+1$

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

$x = \frac{1}{2},\ x = -2,\ x = 2$

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

$a \cdot b = 2 \cdot 5 = 10$

$a + b = 7$

$5 \cdot 2 = 10$

$5 + 2 = 7$

$(2x^2 + 2x) + (5x + 5)$

$2x(x + 1) + 5(x + 1)$

$(2x + 5)(x + 1)(x - 3)$

$2x + 5 = 0$

$\frac{2x}{2} = \frac{-5}{2}$

$x = -\frac{5}{2}, x = -1, x = 3$

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

$-1(-x^3 + 4x^2 - 4x)$

$x^3 - 4x^2 + 4x$

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

$x(x - 2)(x - 2)$

$x = 0, x = 2^2$

$p(x) = (x^2-9)(x^2+x-2)$

$(x+3)(x-3)(x+2)(x-1)$

$p(x) = 2x^3 + 4x^2 - 6x$

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

$2x(x+3)(x-1)$

$x=0,\ x=-3,\ x=1$

$p(x) = 2x^3 - x^2 - 8x + 4$

$(2x^3 - x^2) + (-8x+4)$

$x^2(2x-1) - 4(2x-1)$

$(x^2-4)(2x-1)$

$(x+2)(x-2)(2x-1)$

$2x-1=0$

$2x=1$

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

$\boxed{x=\frac{1}{2},\ x=-2,\ =2}$