

$x^3 - 6x^2 + 7x - 4 \in \mathbb{R}[x]$

$a^2 + bx + c$   
 $x_1 + x_2 = -\frac{b}{a}$   
 $x_1 x_2 = \frac{c}{a}$

$a^2 + b^2 + c^2 + d$   
 $x_1^2 + x_2^2 = \frac{b^2}{a^2} - \frac{2c}{a}$   
 $x_1^2 + x_2^2 + x_3^2 = \frac{b^2}{a^2} - \frac{2c}{a} + x_3^2$   
 $\frac{b^2}{a^2} - \frac{2c}{a} + x_3^2 = \frac{d}{a}$   
 $x_3^2 = \frac{d}{a} - \frac{b^2}{a^2} + \frac{2c}{a}$   
 $d = -(-3)(-3) + (-3)^2 + (-3)^2 = 27 + 9 + 9 = 45$   
 $a = 1, b = -6, c = 7, d = -4$   
 $d = -(-3)(-3) + (-3)^2 + (-3)^2 = 27 + 9 + 9 = 45$   
 $c = (-3)(-3) + (-3)(-3) + (-3)(-3) = 9 + 9 + 9 = 27$   
 $-9 + 9 + 9 = 9$

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$$b = -(-3x_1 + (-3)x_2) + (-3)x_3 =$$

$$= -(-3x_1 - 3x_2 - 3x_3) =$$

$$= 3(x_1 + x_2 + x_3) = 3 \cdot 6 = 18$$

$$\boxed{x^3 + 18x^2 + 63x + 108}$$

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$x^3 + 2x^2 - 5x + 12 \in \mathbb{R}[x]$

Viète Viète

$-\frac{1}{x_1}, -\frac{1}{x_2}, -\frac{1}{x_3}$

$x_1 x_2 x_3 = -12$   
 $x_1 x_2 + x_2 x_3 + x_1 x_3 = -5$   
 $x_1 + x_2 + x_3 = -2$

$x^2 + bx + c + d$   
 $d = (-\frac{1}{x_1})(-\frac{1}{x_2})(-\frac{1}{x_3}) = -\frac{1}{x_1 x_2 x_3} = \frac{1}{-12} = -\frac{1}{12}$

$c = (-\frac{1}{x_1})(-\frac{1}{x_2}) + (-\frac{1}{x_1})(-\frac{1}{x_3}) + (-\frac{1}{x_2})(-\frac{1}{x_3})$   
 $c = \frac{1}{x_1 x_2} + \frac{1}{x_1 x_3} + \frac{1}{x_2 x_3} = \frac{x_3 + x_2 + x_1}{x_1 x_2 x_3} = \frac{-2}{-12} = \frac{1}{6}$

$b = -\left[(-\frac{1}{x_1}) + (-\frac{1}{x_2}) + (-\frac{1}{x_3})\right]$   
 $= -\left[\frac{1}{x_1} + \frac{1}{x_2} + \frac{1}{x_3}\right] = -\frac{x_2 x_3 + x_1 x_3 + x_1 x_2}{x_1 x_2 x_3} = \frac{-5}{-12} = \frac{5}{12}$

$\boxed{x^3 + \frac{5}{12}x^2 + \frac{1}{6}x - \frac{1}{12}}$

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$x_1, x_2, x_3$

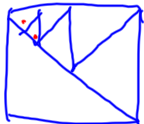
$\boxed{x_1^2, x_2^2, x_3^2}$

$\boxed{x_1 + x_2 + x_3}^2 = x_1^2 + x_2^2 + x_3^2 + 2x_1 x_2 + 2x_1 x_3 + 2x_2 x_3$

$= x_1^2 + x_2^2 + x_3^2 + 2(x_1 x_2 + x_1 x_3 + x_2 x_3)$

$\frac{b}{a} = x_1^2 + x_2^2 + x_3^2 = \boxed{(x_1 + x_2 + x_3)^2} - 2(x_1 x_2 + x_1 x_3 + x_2 x_3)$

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7 or 6 Δ

$2x^3 - 11x^2 + 16x - 6$

$x_1 x_2 x_3$

$V = x_1 \cdot x_2 \cdot x_3 = \frac{6}{2} = 3$

$P = 2(x_1 x_2 + x_2 x_3 + x_1 x_3)$   
 $= 2 \cdot \frac{16}{2} = 16$

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$p(x) = 1 + x + x^2$  (6,4)

$m = \text{MOD}$   
 $p(x) = 1 + x + x^2$   
 $k=4, n=2, n=6$

$m(x) = 1 + x + x^2$

$v(x) = r(x) + \frac{m(x)}{x^k}$   
 je slyšet po dělení  
 $x^4 + m(x) \dots p(x)$

$x^2 m(x) = x^2 + x^3 + x^4$   
 $\frac{x^4 + x^3 + x^2}{x^4 + x^3 + x^2} = x^2 + x + 1$   
 $-x^4 + x^4$   
 $-x^3 + x^3$   
 $-x^2 + x^2$   
 $-x^2 + x^2 + x$   
 $+x + x$   
 $x + x + 1$   
 rhd

$v(x) = 1 + x^2 + x^3 + x^4$   
 $\boxed{v = 10110101}$

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