

$$\begin{aligned} (2x^5+x^4+x+2) : (x^4+2x^3+x^2+2x) &= 2x \\ - (2x^5+x^4+2x^3+x^2) & \\ \hline -x^2+x+2 & \\ (x^4+2x^3+x^2+2x) : (x^3-x^2+x+2) &= x \\ - (x^4-x^3+x^2+2x) & \\ \hline 2x^5+x^4+x+2 &= 2x \cdot (x^4+2x^3+x^2+2x) + (x^3-x^2+x+2) \end{aligned}$$

3 29-15:51

$$\begin{aligned} f &= (x-1)^2 \cdot g(x) \\ f &= (x-1)^2 \cdot (2x^2+3x-1) \\ f &= (x^2-2x+1) \cdot (2x^2+3x-1) \\ f &= 2x^4+3x^3-x^2-2x^3-6x^2-3x+2x^2+3x-1 \\ f &= 2x^4+x^3-4x^2+0x-1 \\ f &= 2x^4+x^3-4x^2-1 \end{aligned}$$

3 29-16:12

$$\begin{aligned} f &= (x+1)^2 \cdot (x-1) \\ f &= (x^2+2x+1) \cdot (x-1) \\ f &= x^3+2x^2+x-x^2-2x-1 \\ f &= x^3+x^2-x-1 \end{aligned}$$

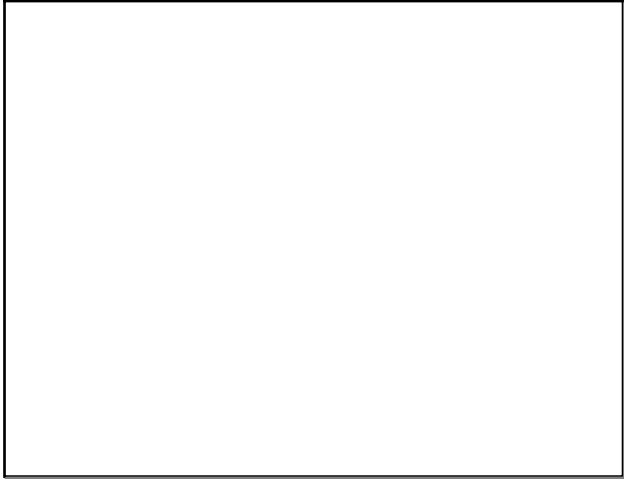
3 29-16:36

$$\begin{aligned} (x-2+i) \cdot (x-2-i) &= (x-2)^2 - (i)^2 \\ &= x^2-4x+4-(-1) \\ &= x^2-4x+5 \end{aligned}$$

3 29-16:54

$$\begin{aligned} f \in \mathbb{R}(x) & \\ \cdot \frac{1}{5+2i} \dots \text{dvojn. k.} &\Rightarrow \underline{5-2i} \\ \frac{1}{5+2i} & \\ f &= \left(x-\frac{1}{2}\right) \cdot \frac{(x-(5+2i))(x-(5-2i))^2}{(x-(5+2i))(x-(5-2i))} \\ \mathbb{R}: & \frac{(x-(5+2i))(x-(5-2i))^2}{(x-(5+2i))(x-(5-2i))} \\ &= x^2-10x+25+4 = x^2-10x+29 \\ \mathbb{R}: & \left(x-\frac{1}{2}\right) \cdot (x^2-10x+29)^2 \end{aligned}$$

3 29-17:09



3 29-17:14

$x^2 - 6x + 2$; $x^2 + 3x + 3$;
 δ, θ
 $\circ (5, 9)$
 $\circ (5, 0)$
 $\circ (5, 0)$
 $(5, 9), (5, 0)$
 $x^2 - 6x + 2$; $x^2 + 3x + 3$
 $(x^2 - 6x + 2) : (x^2 + 3x + 3) = 1$
 $-(x^2 + 3x + 3)$
 $1 - 9x - 1$
 $-(9x)$
 $(x^2 - 6x + 2) : (x^2 + 3x + 3) = x + 3$
 $-(x^2 + 3x + 3)$
 $-9x - 1$
 $9x + 27$
 26
 $x^2 - 6x + 2 = (x + 3)(x^2 + 3x + 3) - 9x - 1$
 $(x^2 - 6x + 2) : (x^2 + 3x + 3) = x + 3$
 $-(x^2 + 3x + 3)$
 $-9x - 1$
 $9x + 27$
 26
 $x^2 - 6x + 2 = (x + 3)(x^2 + 3x + 3) - 9x - 1$
 $(x^2 - 6x + 2) : (x^2 + 3x + 3) = x + 3$
 $-(x^2 + 3x + 3)$
 $-9x - 1$
 $9x + 27$
 26

3 29-17:15

$x^2 + 3x + 5$; $x^2 + 3x + 1$; x^2
 $(x^2 + 3x + 5) + 5 + \frac{3}{2} = 0$
 $(x^2 + 3x) + 5 + \frac{3}{2} = 0$
 $x^2 + 3x = -5 - \frac{3}{2}$
 $x^2 + 3x + \frac{9}{4} = -5 - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -5 - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{10}{2} - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{13}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{26}{4} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{17}{4}$
 $x + \frac{3}{2} = \pm \sqrt{-\frac{17}{4}}$
 $x = -\frac{3}{2} \pm \frac{\sqrt{17}}{2}$
 $x = -\frac{3}{2} + \frac{\sqrt{17}}{2}$; $x = -\frac{3}{2} - \frac{\sqrt{17}}{2}$
 $x^2 + 3x + 5 = 0$
 $x^2 + 3x + \frac{9}{4} = -5 - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{17}{4}$
 $x + \frac{3}{2} = \pm \sqrt{-\frac{17}{4}}$
 $x = -\frac{3}{2} \pm \frac{\sqrt{17}}{2}$
 $x = -\frac{3}{2} + \frac{\sqrt{17}}{2}$; $x = -\frac{3}{2} - \frac{\sqrt{17}}{2}$
 $x^2 + 3x + 5 = 0$
 $x^2 + 3x + \frac{9}{4} = -5 - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{17}{4}$
 $x + \frac{3}{2} = \pm \sqrt{-\frac{17}{4}}$
 $x = -\frac{3}{2} \pm \frac{\sqrt{17}}{2}$
 $x = -\frac{3}{2} + \frac{\sqrt{17}}{2}$; $x = -\frac{3}{2} - \frac{\sqrt{17}}{2}$
 $x^2 + 3x + 5 = 0$
 $x^2 + 3x + \frac{9}{4} = -5 - \frac{3}{2} + \frac{9}{4}$
 $(x + \frac{3}{2})^2 = -\frac{17}{4}$
 $x + \frac{3}{2} = \pm \sqrt{-\frac{17}{4}}$
 $x = -\frac{3}{2} \pm \frac{\sqrt{17}}{2}$
 $x = -\frac{3}{2} + \frac{\sqrt{17}}{2}$; $x = -\frac{3}{2} - \frac{\sqrt{17}}{2}$

3 29-17:24

$(x^5 - 5x^4 + 5x^3 + 5x^2 - 5x + 1) : (x^2 - 6x^3 + 11x^2 - 6x + 1) =$
 $-(x^5 - 6x^4 + 11x^3 - 6x^2 + x)$ $x + 1$
 $x^4 - 6x^3 + 11x^2 - 6x + 1$
 $f = (x+1)(x^2 - 3x + 1)^2$ ročklad na
 ireducibilni
 faktory
 nad \mathbb{Z}, \mathbb{Q}
 $f = (x+1)(x - (\frac{3+\sqrt{5}}{2}))^2 (x - (\frac{3-\sqrt{5}}{2}))^2$
 \mathbb{C}, \mathbb{R}

3 29-16:29



3 29-16:33