

$$\frac{z}{2} = 3 + \frac{1}{2}$$

$$z = 2 \cdot 3 = 6$$

$$1.4 \quad r(x) = \frac{x^4 - 2x^3 + 2x^2 - 5x + 5}{x^3 - 2x^2 + 2x - 4} = X + \frac{-X+5}{x^3 - 2x^2 + 2x - 4}$$

$$(x^4 - 2x^3 + 2x^2 - 5x + 5) : (x^3 - 2x^2 + 2x - 4) = X$$

$$\frac{-(x^4 - 2x^3 + 2x^2 - 4x)}{-X + 5}$$

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

$$k | (-4) \Rightarrow k \in \{\pm 1, \pm 2, \pm 4\}$$

$$m | 1 \Rightarrow m \in \{1\}$$

$$\frac{k}{m} = \{\pm 1, \pm 2, \pm 4\}$$

	1	-2	2	-4
1	1	-1	1	-3
-1	1	-3	5	-9
2	1	0	2	10

$x^2 + 2$

$$\frac{-X+5}{x^3 - 2x^2 + 2x - 4}$$

$$= X + \frac{-X+5}{(x-2)(x^2+2)}$$

$$\frac{-X+C}{(x-2)(x^2+2)} \cdot \frac{(x-2)(x^2+2)}{(x-2)(x^2+2)} = \frac{A}{x-2} + \frac{Bx+C}{x^2+2}$$

$$\frac{-X+5}{(x-2)(x^2+2)} = \frac{A}{x-2} + \frac{Bx+C}{x^2+2} \quad | \cdot (x-2)(x^2+2)$$

$$-x+5 = A(x^2+2) + (Bx+C)(x-2)$$

$$-x+5 = \underline{Ax^2+2A} + \underline{Bx^2-2Bx} + \underline{Cx-2C}$$

$$\underline{-x+5} = \underline{(A+B)x^2} + \underline{(-2B+C)x} + \underline{2A-2C}$$

$$A+B=0$$

$$-2B+C=-1$$

$$2A-2C=5$$

A

B

C