

POLYNOMIN JAKAMINEN TEKIJÖIHIN

E1 $x^2 - 9$

E2 $4x^2 + 12x + 9$

E3 $4x^2 - 14x + 12$

Ratk. nolakohtat

E1 $x^2 - 9 = 0$

$$x^2 = 9 \quad | \sqrt{\quad}$$

$$x = 3 \quad \text{tai} \quad x = -3$$

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$$1 \cdot (x-3)(x-(-3)) = (x-3)(x+3)$$

E2 nolakohtat

$$4x^2 + 12x + 9 = 0$$

$$\begin{aligned} & \underline{a \cdot b x} \\ & = 2 \cdot \underline{2x} \cdot 3 \end{aligned}$$

$$a = 2x$$

$$b = 3$$

$$(a+b)^2 = a^2 + 2ab + b^2$$

↑ ↑

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

$$= (2x+3)(2x+3)$$

E3 nolakohtat

$$4x^2 - 14x + 12 = 0$$

$$\underline{2}x^2 - 7x + 6 = 0$$

| :2

$$\begin{aligned} & a = 2 \\ & b = -7 \\ & c = 6 \end{aligned}$$

$$x = \frac{-(-7) \pm \sqrt{(-7)^2 - 4 \cdot 2 \cdot 6}}{2 \cdot 2}$$

$$= \frac{7 \pm \sqrt{49 - 48}}{4}$$

$$x = \frac{7 \pm 1}{4}$$

$$x = \frac{7+1}{4} = \frac{8}{4} = 2 \quad \text{tai} \quad x = \frac{7-1}{4} = \frac{6}{4} = \frac{3}{2}$$

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$$\underline{2} (x-2) \left(x - \frac{3}{2}\right)$$

$$= (x-2)(2x-3)$$