

1077. Rešiti jednačinu:  $4^x = 2^{\frac{x+1}{x}}$ .

$$4^x = 2^{\frac{x+1}{x}}$$

$$(2^2)^x = 2^{\frac{x+1}{x}}$$

$$2^{2x} = 2^{\frac{x+1}{x}}, \quad x \neq 0$$

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

$$2x^2 = x+1$$

$$2x^2 - x - 1 = 0$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x_{1,2} = \frac{1 \pm \sqrt{1^2 - 4 \cdot 2 \cdot (-1)}}{2 \cdot 2}$$

$$x_{1,2} = \frac{1 \pm \sqrt{1+8}}{4}$$

$$x_{1,2} = \frac{1 \pm \sqrt{9}}{4}$$

$$x_{1,2} = \frac{1 \pm 3}{4}$$

$$x_1 = 1 \quad x_2 = -\frac{1}{2}$$