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$$-\frac{4}{x} = -3x + 1$$

$$\frac{-4 + 3x^2 - x}{x} = 0$$

$$\begin{cases} 3x^2 - x - 4 = 0 & (*) \\ x \neq 0 \end{cases}$$

$$(*) \quad \Delta = 1 + 16 \cdot 3 = 49$$

$$x_1 = \frac{1-7}{6} = -1; \quad x_2 = \frac{1+7}{6} = \frac{8}{6} = \frac{4}{3};$$