

Example 4: Solving a Polynomial Equation

Find the real zeros of $-10x^3 + 15x^2 + 16x - 12 = 0$.

~~1~~ Graph on calculator.

Zeros: 2

$$\begin{array}{r} 2 \overline{) -10 \quad 15 \quad 16 \quad -12} \end{array}$$

$$\begin{array}{r} -20 \quad -10 \quad 12 \\ \hline -10 \quad -5 \quad 6 \quad | \quad 0 \end{array}$$

$$-10x^2 - 5x + 6 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-(-5) \pm \sqrt{(-5)^2 - 4(-10)(6)}}{2(-10)}$$

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