

Page 132 Example 27

Finding complex roots of a polynomial

TI-84 Plus

$$a_5x^5 + \dots + a_1x + a_0 = 0$$

$$a_5 = 1$$

$$a_4 = -4$$

$$a_3 = -3$$

$$a_2 = 34$$

$$a_1 = -52$$

$$a_0 = 24$$

MAIN MODE CLR LOAD SOLVE

$$a_5x^5 + \dots + a_1x + a_0 = 0$$

$$x_1 = -3.0$$

$$x_2 = 2.0 + 8.0E-5i$$

$$x_3 = 2.0 - 8.0E-5i$$

$$x_4 = 2.0$$

$$x_5 = 1.0$$

MAIN MODE COEF STO

$$a_5x^5 + \dots + a_1x + a_0 = 0$$

$$x_1 = -3$$

$$x_2 = 2.00004592 + \dots$$

$$x_3 = 2.00004592 - \dots$$

$$x_4 = 1.99990816$$

$$x_5 = 1$$

MAIN MODE COEF STO

Casio fx-9860GII

$$a_0x^5 + a_1x^4 + \dots + a_5 = 0$$

$$\begin{array}{cccc} a_0 & a_1 & a_2 & a_3 \rightarrow \\ \hline 1 & -4 & -3 & 34 \end{array}$$

SOLVE DEL CLR EDIT

1

$$a_0x^5 + a_1x^4 + \dots + a_5 = 0$$

$$x_1 = -3$$

$$x_2 = 2 + 8i \times 10^{-5}$$

$$x_3 = 2 - 8i \times 10^{-5}$$

$$x_4 = 2$$

$$x_5 = 1$$

REPT

2