

Chapter 3 / **Example 13****Operations with complex numbers**

If $z_1 = 4 - 3i$ and $z_2 = -2 + 5i$, calculate the following and check your answers with a calculator.

a $z_1 - z_2$ **b** $\frac{1}{3}z_1 + \frac{2}{5}z_2$

Press **MENU** 1 **RUN-MAT** to display the Run-Matrix screen for arithmetical calculations.

Type $(4 - 3i) - (-2 + 5i)$

To enter i press **SHIFT** 0 **i**

Press **EXE**.

$$z_1 - z_2 = 6 - 8i$$

The calculator screen displays the expression $(4-3i) - (-2+5i)$ and the result $6-8i$. The bottom of the screen shows the menu options: JUMP, DELETE, MAT/VCT, and MATH.

Type $\frac{1}{3}(4 - 3i) + \frac{2}{5}(-2 + 5i)$

To enter i press **SHIFT** 0 **i** and use the fraction template, **□** to enter the fractions.

Press **enter**.

$$\frac{1}{3}z_1 - \frac{2}{5}z_2 = \frac{8}{15} + i$$

The calculator screen displays the expression $\frac{1}{3}(4-3i) + \frac{2}{5}(-2+5i)$ and the result $\frac{8}{15} + i$. The bottom of the screen shows the menu options: JUMP, DELETE, MAT/VCT, and MATH.