

1) write the quadratic function in standard form

$$g(x) = x^2 - 8x$$

$$\checkmark \text{ B} = x^2 - 8x + 0$$

✓ Graph C is correct

$$\text{Vertex } (-4, -16)$$

$$\text{axis of symmetry } x = -4$$

$$x \text{ intercept } (x_1, g(x)) = (-8, 0) \text{ smaller } x \text{ value}$$

$$x \text{ intercept } (x_2, g(x)) = (0, 0) \text{ larger value}$$

2) write the complex in standard form

$$-9i + i^2$$

$$\frac{9+i}{-2i-1}$$

$$= -2i - 1$$

$$= \underline{\underline{-1 - 2i}}$$

3

$$h(x) = 3 - x^6$$

✓ The graph rise to the left

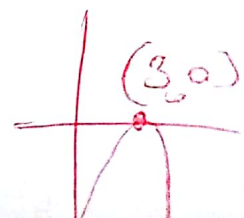
4

$$-(x^2 - 6x + 9)$$

$$-x^2 + 6x - 9$$

$$\text{Vertex } = (3, 0)$$

✓ Ans Graph D



$$\textcircled{5} (1+i)(3-2i)$$

$$3 - 2i + 3i + 2$$

$$\underline{\underline{5+i}}$$

$\textcircled{6}$ match the polynomial with graph.

$\Rightarrow$ Graph C

$$\textcircled{7} \quad \begin{array}{r} \cancel{5x^3} - 11x^2 + 6x + 9 \\ x^3 - x - 3 \overline{) x^4 + 5x^3 - 20x - 11} \\ \underline{x^4 - x^3 - 3x^2} \\ 6x^3 + 3x^2 - 20x \\ \underline{6x^3 - 6x^2 - 18x} \\ 9x^2 - 2x - 11 \\ \underline{9x^2 - 9x - 27} \\ 7x + 16 \end{array}$$

$$= x^2 + 6x + 9 + \frac{7x + 16}{x^3 - x - 3}$$

$$\textcircled{8} \underline{\underline{6x^2 - 26x - 5}}$$

$$\textcircled{9} \quad 3 - \sqrt{-75}$$

$$\underline{\underline{3 - 5i\sqrt{3}}}$$

$\textcircled{10}$ (a) Graph B

(b) Graph A

(c) Graph D

(d) Graph A

(e) Graph B

(f) Graph C