SPTA
Higher Homework
Polynomials (A)

1. Calculate the remainder when $x^3 - 11x + 10$ is divided by $x + 3$ **(2)**

2. For what value of k is $(x + 2)$ a factor of $2x^3 + 3x^2 + kx - 4$? **(2)**

3. (i) Show that $(x - 4)$ is a factor of $x^3 - 5x^2 + 2x + 8$.
(ii) Factorise $x^3 - 5x^2 + 2x + 8$ fully.
(iii) Solve $x^3 - 5x^2 + 2x + 8 = 0$. **(6)**

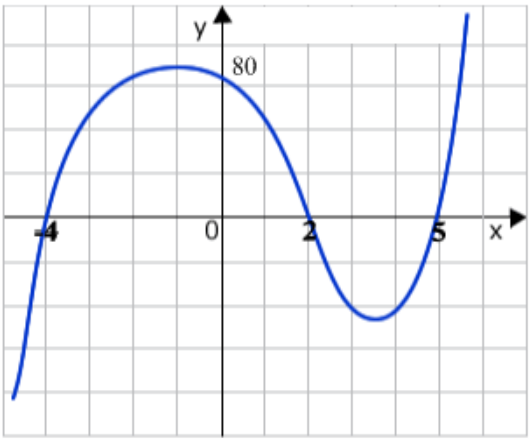
4. Find **p** if the remainder on dividing $x^4 + px^3 - 5x + 11$ by $(x - 3)$ is -4 **(3)**

5. Find the values of *a* and *b* if $(x + 5)$ and $(x - 3)$ are both factors of

$$f(x) = x^3 + ax^2 + bx - 15$$ **(6)**

6. Solve $x^3 + 11x^2 + 23x - 35 = 0$ **(4)**

7. Find the equation of the graph shown



(4)