

The Remainder Theorem

- 1) Find the remainder when $x^3 - 2x^2 - x - 2$ is divided by $x + 1$.
- 2) If $f(x) = x^3 + 3x - 4$. Find the remainder when $f(x)$ is divided by $x - 4$.
- 3) Find the remainder when $x^3 + 3x - 4$ is divided by $x + 1$.
- 4) Given that $f(x) = 6x^3 - 3x^2 - 17x + 7$, divide $f(x)$ by $2x + 3$.
- 5) Find the remainder when $6x^3 + 27x^2 - 14x + 15$ is divided by $x + 5$.
- 6) When divided by $(x + 1)$ and $(x + 2)$, the expression $ax^2 + bx + 3$ leaves remainders 6 and 9 respectively. Find the values for **a** and **b**.
- 7) Find the remainder when $x^3 + 3x^2 - 5x - 6$ is divided by $x + 2$.

