

## Instructions

Solve the following polynomial division problems. Perform the division and express the quotient and remainder (if any).

## Problems

### Problem 1

Divide  $2x^3 + 3x^2 + 4x + 5$  by  $x + 1$ .

### Problem 2

Divide  $x^4 - 2x^3 + x^2 - 3x + 2$  by  $x - 1$ .

### Problem 3

Divide  $6x^3 + 11x^2 - 7x - 6$  by  $2x + 3$ .

### Problem 4

Divide  $x^5 - 4x^4 + 3x^3 - x + 1$  by  $x^2 + x - 1$ .

**Problem 5**

Divide  $4x^4 - 3x^3 + 2x^2 - x + 1$  by  $x^2 + 2x + 1$ .

**Problem 6**

Divide  $5x^3 - 6x^2 + 4x - 8$  by  $x - 2$ .

**Problem 7**

Divide  $3x^4 + 5x^3 - 2x^2 + 7x + 4$  by  $x^2 - x + 2$ .