

d) Divide the polynomial $x^2 - 9x - 10$ by $(x+1)$

$$\begin{array}{r}
 x+1 \overline{) x^2 - 9x - 10} \\
 \underline{x^2 + x} \\
 10x - 10 \\
 \underline{10x + 10} \\
 20 \leftarrow \text{Remainder}
 \end{array}$$

$$= x + 10 \text{ rem } 20$$

e) Divide the polynomial $2x^3 + 4x^2 - 5$ by $(x+3)$

$$\begin{array}{r}
 x+3 \overline{) 2x^3 + 4x^2 + 0x - 5} \\
 \underline{2x^3 + 6x^2} \\
 (-2x^2) + 0x \\
 \underline{(-2x^2) - 6x} \\
 6x - 5 \\
 \underline{6x + 18} \\
 -23
 \end{array}$$

$$= 2x^2 - 2x + 6 \text{ rem } -23$$

Question 2.

a) Solve by substitution

$$(1) -x + y = 2$$

$$(2) 2x + y = 11$$

$$(1) -x + y = 2$$

$$y = 2 + x$$

$$(2) 2x + 2 + x = 11$$

$$3x + 2 = 11$$

$$3x = 9$$

$$x = 3$$