

Assignment two

- 6** Perform the following multiplications and simplify your results:

(a) $(3x - 1)(x^2 - x - 1)$

(b) $(a^2 + 2a + 2)(3a^2 + 4a + 4)$

- 7** Simplify each of the following:

(a) $\frac{x^3}{y^2} \div \frac{x}{y^3}$

(b) $\frac{ab}{c} \div \frac{ac}{b} \times \frac{bc}{a}$

- 8** Perform the following divisions:

(a) $(x^2 + 2x - 3) \div (x - 1)$

(b) $\frac{n^3 + 27}{n + 3}$

(c) $\frac{3a^3 + 2a^2 + 1}{a + 1}$

- 9** Factorize the following:

(a) $36x^3y^2 - 8x^2y$

(b) $x^3 + 3x^2y + 2xy^2 + 6y^3$

(c) $4x^2 + 12x + 9$

(d) $(3x + 4y)^2 - (2x - y)^2$

(e) $x^2 + 10x + 24$

(f) $x^2 - 10x + 16$

(g) $x^2 - 5x - 36$

(h) $6x^2 + 5x - 6$