

(C2-1.1a) Name:

## Homework Questions 1 – Simplifying Algebraic Fractions

Simplify the following by division

a)  $\frac{3x^3 + 2x^2 + x}{x}$

$$3x^2 + 2x + 1$$

b)  $\frac{5x^3 + 4x^2 - 2x}{-2x}$

$$-\frac{5x^2}{2} - 2x + 1$$

c)  $\frac{4x^3 + 3x^2 + 7x}{x}$

$$4x^2 + 3x + 7$$

d)  $\frac{-8x^4 + 6x^3 - 6x^2}{-2x^2}$

$$4x^2 - 3x + 3$$

e)  $\frac{5x^2 + 6x - 3}{x^2}$

$$5 + \frac{6}{x} - \frac{3}{x^2}$$

f)  $\frac{7x^3 - 3x^2 + 5x}{x^2}$

$$7x - 3 + \frac{5}{x}$$

g)  $\frac{3x^5 - 6x^3}{2x^2}$

$$\frac{7x^3}{2} + 1 + \frac{2}{x^2}$$

h)  $\frac{7x^5 + 3x^2 + 6}{3x^2}$

$$\frac{7x^3}{5} + 1 + \frac{2}{x^2}$$

i)  $\frac{4x^2 + 6x - 5}{2x}$

$$2x + 3 - \frac{5}{2x}$$

j)  $\frac{12x^3 - 9x^2 + 3x}{3x^2}$

$$4x - 3 + \frac{1}{x}$$