

(C1-1.2a) Name:

## Homework Questions 2 – Simplifying Using Laws of Indices

1. Simplify the following like terms

a)  $x^4 \times x^2$

$$x^6$$

b)  $5y^4 \times 3y^6$

$$15y^{10}$$

c)  $2x^3y^5 \times 6x^3y^4$

$$12x^6y^9$$

d)  $12x^6 \div 4x^3$

$$3x^3$$

e)  $20x^7y^4 \div 5x^4y^3$

$$4x^3y$$

f)  $\frac{30x^3y^2z^5}{10x^4y^3z^6}$

$$\frac{3}{xyz}$$

g)  $(2a)^3$

$$8a^3$$

h)  $(3x^2)^3$

$$27x^6$$

i)  $\left(\frac{4x^3}{3}\right)^2$

$$\frac{16x^6}{9}$$

j)  $\left(\frac{2x^2y^4}{5z^3}\right)^3$

$$\frac{8x^6y^{12}}{125z^9}$$