

## **Notes 1.1 Multiplying powers with the same base**

$$A^x A^y = A^{x+y}$$

## **Notes 1.2 More multiplication properties of exponents**

$$(AB)^x = A^x B^x$$

$$\left(\frac{A}{B}\right)^x = \frac{A^x}{B^x}$$

$$(A^x)^y = A^{xy}$$

## **Notes 1.3 Division properties of exponents**

$$\frac{A^x}{A^y} = A^{x-y}$$

## **Notes 1.4 Zero and negative exponents**

$A^0 = 1$ , exception is  $0^0 = \textit{undefined}$

$$A^{-x} = \frac{1}{A^x} \text{ and } \frac{1}{A^{-x}} = A^x$$