

Introduction to Maths 1 of 4 and Science

① i) $x^4 \times x^6 \times x$

$$4 + 6 + 1 = 11 \therefore = \boxed{x^{11}}$$

ii) $2x^2 \times 3x^3 \times 2x$

$$\cancel{2} \times \cancel{3} \times 2 = 12 \quad 2 + 3 + 1 = 6$$

$$\Rightarrow \boxed{12x^6}$$

iii) $\frac{x^4 \times x^3 \times x^2}{x^9} \Rightarrow \frac{x^9}{x^9} \Rightarrow \boxed{1}$

iv) $(3x^2)^3 \quad 3^3 = 9$

$$\Rightarrow \cancel{9x^6} \quad \boxed{9x^6}$$

v) $\sqrt{x} \times \sqrt{x}$

$$\Rightarrow x^{\frac{1}{2}} \times x^{\frac{1}{2}} = x^1 \Rightarrow \boxed{x}$$

② i) $15x - 2 = 12x + 9$

$$+2 \Rightarrow 15x = 12x + 9$$

$$-12x \Rightarrow 3x = 9 \therefore \boxed{x = 3}$$

ii) $3(7x - 1) = 6(x + 3)$

$$\Rightarrow 21x - 3 = 6x + 18$$

$$+3 \Rightarrow 21x = 6x + 18$$

$$-6x \Rightarrow 15x = 18 \therefore x = \frac{18}{15} \Rightarrow \boxed{x = \frac{6}{5}}$$