

2004364

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Simplify the following

$$i) x^4 \times x^6 \times x \times x$$

$$= x^{11}$$

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

$$= 12x^5$$

$$iii) \frac{x^4 \times x^3 \times x^2}{x^9} = \frac{x \times x \times x \times x \times x \times x \times x}{x \times x \times x \times x \times x \times x \times x} = \frac{x^4}{x^9} = x^{-5}$$

$$iv) (3x^2)^3 = 27x^6$$

$$v) \sqrt{x} \times \sqrt{x} = \sqrt{x^2}$$

2) Solve the following linear equations for x:

$$i) 15x - 2 = 12x + 9$$

$$15x - 12x = 9 + 2$$

$$3x = 11$$

$$x = \frac{11}{3} = 3.67$$

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

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

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

$$15x = 21$$

$$x = \frac{21}{15} = \frac{7}{5} = 1.4$$

$$x = 1.4$$

$$iii) \frac{5x + 3}{4} = \frac{2x - 1}{9}$$

$$9(5x + 3) = 4(2x - 1)$$

$$45x + 27 = 8x - 4$$

$$45x - 8x = -4 - 27$$

$$37x = -31$$

$$x = \frac{-31}{37} = -0.84$$