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Introduction to mathematics exam paper

1.

(i) $x^4 \times x^6 \times x = x^{12}$

(ii) $2x^2 \times 3x^3 \times 2x = 12x^6$

(iii) $\frac{x^4 \times x^3 \times x^2}{x^9} = \frac{3x^9}{x^9} = 3x \quad x=3$

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

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

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

$15x - 12x = 9 + 2$

$3x = 11$

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

$x = 3.67$

$x = 3.67$

(ii)

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

$21x - 3 = 6x + 18$

$21x - 6x = 18 + 3$

$15x = 21$

$x = \frac{21}{15}$

$x = 1.4$

$x = 1.4$