

ACHA 3000
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(i) $x^4 \times x^6 \times x = 3x^{10}$

(ii) $2x^2 \times 3x^3 \times 2x = 7x^5$

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

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

(v) $\sqrt{x} \times \sqrt{x} = x^{\frac{1}{2} + \frac{1}{2}} = x^1 = x$

2)

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

$\{15x + 12x + 9 + 2\}$

$3x = 11$

$x = \frac{11}{3} \quad x = 3.60$

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

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

$3(8x^2) = 6(2)$

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

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

$(21x + 6x)(18 - 3)$

$27x = 15$

$\frac{27}{15} = 1.80 \quad \boxed{x = 1.8}$