

P1

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ACHA3000

① i) x''

ii) $12x^6$

iii) $x^0 / 1$

iv) $27x^6$

v) $d/dx (\sqrt{x} \sqrt{x}) = 0$

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

$$3x - 2 = (12x - 12x) + 9$$

$$3x - 2 = 9$$

$$3x = 9 + 2$$

$$3x = 11$$

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

ii) $3(2x - 1) = 6(x + 3)$

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

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

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

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

$$15x - 3 = 18$$

$$15x = 21$$

$$x = 21/15$$

$$x = 7/5$$

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

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

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

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

$$37x/36 + 3/4 = (2x)/9 - (2x)/9 - 1/9$$

$$37x/36 + 3/4 = ((2x)/9 - (2x)/9) - 1/9$$

$$(37x)/36 + 3/4 = (-1)/9$$

$$37x/36 + (3/4 - 3/4) = -3/4 - 1/9$$

$$37x/36 = -31/36$$

$$x = (-31)/37$$