

10:56 17/11/2021 ACMA 4006

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①

a) i) $\frac{(x+5)}{3} - \frac{(x-1)}{4} = \frac{x+3}{5}$

~~x+3~~

~~B~~ $3 \times 4 \times 5 = 60$ $\times 60$

$$\frac{60(x+5)}{3} - \frac{60(x-1)}{4} = \frac{60(x+3)}{5}$$

$$20(x+5) - 15(x-1) = 12(x+3)$$

$$20x + 100 - 15x + 15 = 12x + 36$$

$$5x + 115 = 12x + 36$$

$$7x = 79$$

$$x = \frac{79}{7}$$

$$x = 11.29$$

ii) $2 \ln(2x+4) = \ln(2x+1) + \ln(4x+3)$

$$\ln(2x+4)^2 = \ln(2x+1)(4x+3)$$

$$(2x+4)^2 = (2x+1)(4x+3)$$