

$$-4 - 18 = 24x + 13x$$

$$-22 = 37x$$

$$\frac{-22}{37} = x$$

$$-0.594 = x$$

$$\underline{-0.594 = x}$$

$$(iii) 2 \log(5x+3) = \log(x+1) \log(x+2)$$

$$\log(5x+3)^2 = \log(x+1)(x+2)$$

$$(5x+3)(5x+3) = (x+1)(x+2)$$

$$25x^2 + 15x + 15x + 9 = x^2 + 2x + x + 2$$

$$25x^2 + 30x + 9 = x^2 + 3x + 2$$

$$24x^2 + 27x + 7 = 0$$

$$\begin{matrix} a & b & c \\ x = \frac{(27) \pm \sqrt{(27)^2 - 4(24)(7)}}{2(24)} \end{matrix}$$

$$x = \frac{(27) \pm \sqrt{(729) - (672)}}{48}$$

$$x = \frac{(27) \pm \sqrt{57}}{48}$$

$$\cancel{x = \frac{(27) \pm 7.55}{48}}$$

$$x = \frac{27 \pm 7.55}{48}$$

$$x = \frac{27 + 7.55}{48}$$

$$= \underline{0.72}$$

$$x = \frac{27 - 7.55}{48}$$

$$= \underline{0.41}$$

(iv)