

$$(2x-1)(3x+5) = (6x-5)(x-9)$$

~~$$6x^2 + 10x - 3x + 4 = 6x^2 - 54x - 5x + 45$$~~

~~$$= 10x - 3x + 4 = -54x - 5x + 45$$~~

~~$$= 7x + 4$$~~

~~$$= -59x + 45$$~~

~~$$\downarrow -7x$$~~

~~$$= 4 = -66x + 45$$~~

~~$$-41 = -66x$$~~

~~$$x = \frac{-41}{-66}$$~~

~~$$x = 0.621$$~~

Question 2
ai

$$(2x-1)(3x+5) = (6x-5)(x-9)$$
~~$$6x^2 + 10x - 3x - 5 = 6x^2 - 54x - 5x + 45$$~~

~~$$10x - 3x - 5 = -54x - 5x + 45$$~~

~~$$7x - 5 = -59x + 45$$~~

~~$$\downarrow -7x - 5 = -66x + 45$$~~

~~$$-50 = -66x$$~~

~~$$x = \frac{-50}{-66}$$~~

~~$$x = 0.75$$~~

2a ii

$$\frac{x-4}{4} = \frac{2x-1}{3}$$

cross multiply / remove bottom

$$= (x-4)3 = (2x-1)4$$

$$= 3x - 12 = 8x - 4 \quad \downarrow +4$$

$$= 3x - 8 = 8x \quad \downarrow -3x$$

$$-8 = 5x$$

$$x = \frac{-8}{5}$$

$$x = -1.6$$