

2.6 #37

$$3 \left( \frac{26}{3(x+2)} \right) \leq \left( \frac{35}{3(x-1)} - 2 \right) 3$$

$$\frac{26}{x+2} \leq \frac{35}{x-1} - 6$$

$$\frac{26}{x+2} - \frac{35}{x-1} + 6 \leq 0$$

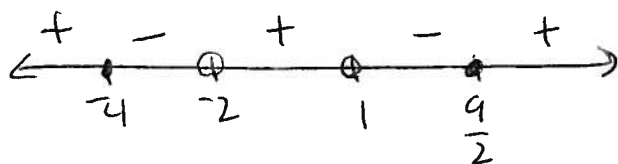
$$\frac{26(x-1) - 35(x+2) + 6(x+2)(x-1)}{(x+2)(x-1)} \leq 0$$

$$\frac{26x - 26 - 35x - 70 + 6x^2 + 6x - 12}{(x+2)(x-1)} \leq 0$$

$$\frac{6x^2 - 3x - 108}{(x+2)(x-1)} \leq 0$$

$$\frac{3(2x^2 - x - 36)}{(x+2)(x-1)} \leq 0$$

$$\frac{3(x+4)(2x-9)}{(x+2)(x-1)} \leq 0$$



soln:  $[-4, -2) \cup (1, \frac{9}{2}]$

factor:

$$2x^2 - x - 36$$

$$2 \cdot -36 = -72$$

choose factor pair  $-9 \cdot 8$

because  $-9 + 8 = -1$

$$2x^2 - x - 36$$

$$= 2x^2 - 9x + 8x - 36$$

$$= x(2x-9) + 4(2x-9)$$

$$= (x+4)(2x-9)$$