

1. Find the set of all x for which

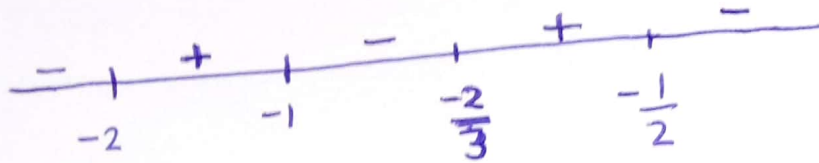
$$\frac{2x}{2x^2+5x+2} > \frac{1}{x+1}$$

Solⁿ

$$\Rightarrow \frac{2x}{(2x+1)(x+2)} - \frac{1}{(x+1)} > 0$$

$$\Rightarrow \frac{2x(x+1) - (2x+1)(x+2)}{(2x+1)(x+2)(x+1)} > 0$$

$$\Rightarrow \frac{-(3x+2)}{(2x+1)(x+1)(x+2)} > 0$$



we want only +ve values so,

$$x \in (-2, -1) \cup \left(-\frac{2}{3}, -\frac{1}{2}\right)$$