Reducing Equation to simpler form:

Solve: $\frac{x+1}{2x+3} = \frac{3}{8}$

Multiplying both sides with $2x + 3$

$\Rightarrow \frac{x+1}{2x+3} * (2x+3) = \frac{3}{8} * (2x+3)$

$\Rightarrow x + 1 = \frac{3\,(2x+3)}{8}$

Multiplying both sides with 8

$\Rightarrow 8(x+1)=3(2x+3)$

$\Rightarrow 8x+8=6x+9$

$\Rightarrow 8x=6x+9-8$

$\Rightarrow 8x=6x+1$

$\Rightarrow 8x-6x=1$

$\Rightarrow x=12$

Examples:

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

2. $\frac{y-2}{2y+2} = \frac{5}{2}$

3. $\frac{x-2}{3} + \frac{2x+3}{2} = \frac{2x}{3}$