

Instruction: Solve the following inequalities.

1. $x < \frac{4}{3}$

2. $x \geq -\frac{6}{5}$

3. $x \leq \frac{23}{8}$

4. $x < 9$

5. $x > 19$

6. $x > \frac{1}{4}$

7. $x \geq -\frac{3}{5}$

8. $x \leq -\frac{15}{52}$

9.

$$\begin{aligned} \frac{x}{3} + \frac{x-3}{4} - \frac{2x-7}{2} > 0 & \text{ Multiply both sides by 12} \\ 4x + 3(x-3) - 6(2x-7) > 0 \\ 4x + 3x - 9 - 12x + 42 > 0 \\ -5x + 33 > 0 \\ 33 > 5x \\ x < \frac{33}{5} \end{aligned}$$

10.

$$\begin{aligned} \frac{3x-4}{5} - \frac{x+1}{4} \leq \frac{2}{3} & \text{ Multiply by 60} \\ 12(3x-4) - 15(x+1) \leq 20 \cdot 2 \\ 36x - 48 - 15x - 15 \leq 40 \\ 21x - 63 \leq 40 \\ 21x \leq 103 \\ x \leq \frac{103}{21} \end{aligned}$$