

$$\frac{10}{2x+1} + \frac{4}{3} = 2$$

$$3 - \frac{4}{x} > \frac{5}{4x}$$

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$$\frac{10}{2x+1} + \frac{4}{3} = 2$$

Excluded Val.
 $2x+1 \neq 0$
 $x \neq -\frac{1}{2}$

LCD: $3(2x+1)$

$$\cancel{3(2x+1)} \frac{10}{\cancel{2x+1}} + \cancel{3(2x+1)} \frac{4}{\cancel{3}} = \cancel{3(2x+1)} 2$$

$$3(10) + (2x+1)(4) = 6(2x+1)$$

$$30 + 8x + 4 = 12x + 6$$

$$8x + 34 = 12x + 6$$

$$-8x \quad -8x$$

$$34 = 4x + 6$$

$$-6 \quad -6$$

$$28 = 4x$$

$$x = 7$$

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Excluded Value: 0 LCD: $4x$

$$3 - \frac{4}{x} > \frac{5}{4x}$$

$$3 - \frac{4}{x} = \frac{5}{4x}$$

$$\frac{4x}{1}(3) - \frac{4x}{1}\left(\frac{4}{x}\right) = \frac{4x}{1}\left(\frac{5}{4x}\right)$$

$(-\infty, 0)$ or $[\frac{7}{4}, \infty)$

$12x - 16 = 5$
 $12x = 21$
 $x = \frac{21}{12} = \frac{7}{4}$

$\checkmark 3 - \frac{4}{-1} > \frac{5}{4(-1)}$

$\times 3 - \frac{4}{1} > \frac{5}{4(1)}$

$\checkmark 3 - \frac{4}{2} > \frac{5}{4(2)}$

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Ex. val $\frac{8}{x-5} - \frac{9}{x-4} = \frac{5}{x^2-9x+20}$
 $(x-5)(x-4)$

$$\frac{(x-5)(x-4)8}{(x-5)} - \frac{(x-5)(x-4)9}{x-4} = \frac{5}{(x-5)(x-4)}$$

$$8(x-4) - 9(x-5) = 5$$

$$8x - 32 - 9x + 45 = 5$$

$$-x + 13 = 5$$

$$-x = -8$$

$x = 8$

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$$\begin{aligned} & \frac{\frac{x+3}{x+3} \cdot 3}{x-3} - \frac{18}{\cancel{x^2-9}} \\ & \qquad \qquad \qquad (x+3)(x-3) \\ & = \frac{3(x+3) - 18}{(x+3)(x-3)} \\ & = \frac{3x+9-18}{(x+3)(x-3)} = \frac{3x-9}{(x+3)(x-3)} \\ & \qquad \qquad \qquad = \frac{3\cancel{(x-3)}}{(x+3)\cancel{(x-3)}} = \frac{3}{x+3} \end{aligned}$$

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