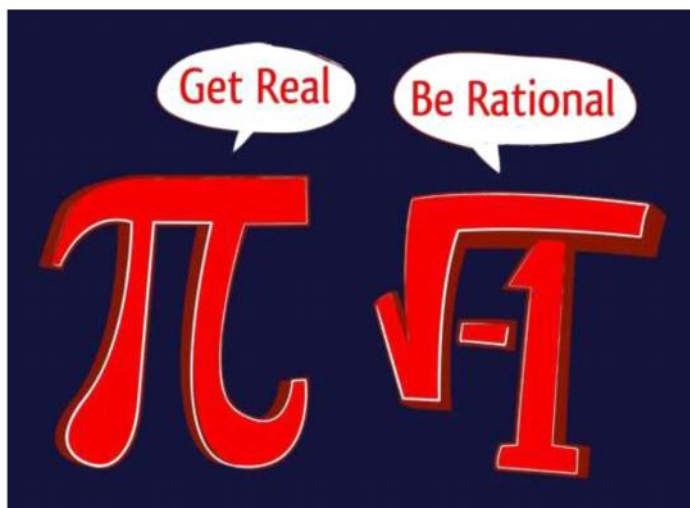


Today, we do it all --
equation style!



$$\frac{x}{4} - \frac{7}{x} = \frac{3}{1}$$

| | |
|---|--|
| Non Permissible Values | $x \neq 0$ |
| Lowest Common Denominator | $\frac{4x}{4x}$ |
| There is an equal sign. Multiply each term by the LCD. Clear fractions. | $\frac{x(4x)}{4} - \frac{7(4x)}{x} = 3(4x)$ $x^2 - 7(4) = 12x$ |

| | |
|---|--|
| Solve. Factoring / Quadratic Formula | $x^2 - 12x - 28 = 0$ $-14, 2$ $(x - 14)(x + 2) = 0$ $x = 14, -2$ |
| Check Non Permissible values. Substitute | $\frac{x}{4} - \frac{7}{x} = 3$ $\frac{14}{4} - \frac{7}{14} = 3$ $\frac{-2}{4} - \frac{7}{-2} = 3$ $\frac{7}{2} - \frac{1}{2} = 3$ $\frac{-1}{2} + \frac{7}{2} = 3$ $\frac{6}{2} = 3 \checkmark$ $\frac{6}{2} = 3 \checkmark$ |

$$\frac{9}{y-3} - \frac{4}{y-6} = \frac{18}{(y-6)(y-3)}$$

$\frac{9}{y-3} - \frac{4}{y-6} = \frac{18}{y^2 - 9y + 18}$ $-6, -3$
 $(y-6)(y-3)$
 L.C.D.: $(y-6)(y-3)$

$$9(y-6) - 4(y-3) = 18$$

$$9y - 54 - 4y + 12 = 18$$

$$5y - 54 + 12 - 18 = 0$$

$$5y - 60 = 0$$

$$y = \frac{60}{5} = 12$$

$y \neq \underline{3, 6}$

$$\Rightarrow \frac{3x}{x+2} - \frac{5}{x-3} = \frac{-25}{x^2-x-6}$$

\uparrow \uparrow \uparrow \uparrow
 $(x-3)(x+2)$ $(x-3)(x+2)$ $(x-3)(x+2)$

2, -3

$ab = ba$

NPV: $x \neq -2, 3$
 LCD: $(x-3)(x+2)$

$3x(x-3) - 5(x+2) = -25$

$3x^2 - 9x - 5x - 10 + 25 = 0$

$3x^2 - 14x + 15 = 0$

$(x-3)(3x-5) = 0$

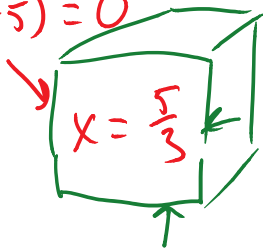
$ab = 45$

$a+b = -14$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

\uparrow

~~$x = 3$~~
 NPV.



Quiz Tomorrow on Adding and Subtracting.

HW: pg: 349
 #1,2,3,4,6