Bellwork - Khan Academy

Subject --> SAT --> Practice --> Math -->

Problem Solving and Data Analysis -->

Key Features of Graphs -->

Practice - do 5 questions. Must show me,
this one I can't see from my side of program.

Sec 2.7 con't

ex. $\frac{1}{x} - \frac{2}{x-3} = 4$ $\quad x(x-3)$ $\quad x(x-3)$ $\quad x(x-3)$

Rest: $x \neq 3, 0$

$1(x-3) - 2(x) = 4x(x-3)$

$x - 3 - 2x = 4x^2 - 12x$

$-3 - x - 4x^2 + 12x = 0$

$-1(-4x^2 + 11x - 3 = 0)$

$4x^2 - 11x + 3 = 0$

12
-12 -1
-2 -6
-3 -4

$x = \frac{-(-11) \pm \sqrt{(-11)^2 - 4(4)(3)}}{2(4)}$

$x = \frac{11 \pm \sqrt{121 - 48}}{8} = \frac{11 \pm \sqrt{73}}{8}$

$\frac{11 + \sqrt{73}}{8} = 2.46$ $\quad \frac{11 - \sqrt{73}}{8} = 0.31$

1. Determine common denominator, then multiply numerator by it.
2. New equation without denominator distribute, collect like terms.
3. If have both x^2 and x, move everything to the left and set equal to zero.
4. Factor (or at least try), if doesn't work use: Quadratic formula:

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

ex. $\frac{4x}{x+4} + \frac{3}{x-1} = \frac{15}{x^2+3x-4}$

$(x+4)(x-1)$ $3(x+4)(x-1)$ 15 $(x+4)(x-1)$

Rest: $x \neq -4, 1$

$4x(x-1) + 3(x+4) = 15$

$4x^2 - 4x + 3x + 12 - 15 = 0$

$4x^2 - x - 3 = 0$

-12

$-4 \quad 3$

$\frac{(4x-4)}{4}(4x+3) = 0$

$(x-1)(4x+3) = 0$

$x = \cancel{1}, -\frac{3}{4}$

extraneous solution

1. Determine common denominator and mult. by it .

2. Try to fake factor first, before using Quadratic Formula.

3. Once get answers, check answers in original equation to see if they work.