Day 44/45 Warm-Up:

Complete the second section of problems on the back of the angry birds worksheet

Simplifying Complex Fractions

1. $\dfrac{3}{\frac{2}{x}+y}$

$\dfrac{2}{x}+\dfrac{y\cdot x}{1\cdot x}$

$\dfrac{3}{\frac{2+yx}{x}}$ ← Flipped & Mult.

$3\cdot\dfrac{x}{2+yx}=\dfrac{3x}{2+yx}$

2. $\dfrac{\frac{3}{x+1}}{\frac{5}{x-1}}$

$\dfrac{3(x-1)}{5(x+1)}$

3. $\dfrac{1+\frac{2}{x}}{4-\frac{6}{x}}$

$\dfrac{x+2}{4x-6}$

$\dfrac{x+2}{2(2x-3)}$

4. $\dfrac{\frac{1}{x-2}}{2+\frac{1}{x}}$

$\dfrac{1}{x-2}\div\dfrac{x}{2x+1}$

$\dfrac{\frac{1}{x-2}}{\frac{2x+1}{x}}$

$\dfrac{x}{2x^2-3x-2}$

$=\dfrac{x}{(x-2)(2x+1)}$

$\frac{a+1}{5a} - \frac{1}{a} = \frac{1}{1}$ → $\frac{a+1}{5a} - \frac{5}{5a} = \frac{5a}{5a}$

① common denominator ② cancel denominators ③ solve for a

$\frac{1}{k^2} = \frac{1}{3k^2} + \frac{k+5}{3k^2}$ $\quad \frac{1}{9} = \frac{1}{27} + \frac{8}{27}$

$\frac{3}{3k^2} = \frac{1}{3k^2} + \frac{k+5}{3k^2}$ $\quad 6(n^2+7n+6) = n^2 - 1$

$6n^2+42n+36 = n^2-1$

$+1 \quad -n^2 \quad +1$

$5n^2+42n+37 = 0$

$\frac{1}{x+5} - \frac{1}{x^2+5x} = \frac{4}{x^2+5x}$ $\quad (5n+37)(n+1) = 0$

$n = -7.4$ $\quad n = -1$

CD: x^2+5x

CD: $6n^2 x(x+5)(n+1) = 0$

CD: $\frac{n^2+7n+6}{6 \cdot n^2} \cdot n^2 = \frac{1}{6} - \frac{1}{6n^2}$

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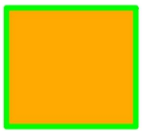
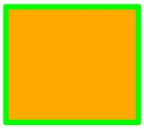
$5n^2+5n+37n+37 = 0$

$5n(n+1) \quad 37(n+1) = 0$

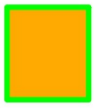
1. $\frac{4}{x}+\frac{1}{x^2}=\frac{1}{5x^2}$



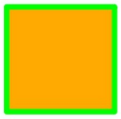
2. $\frac{x-5}{x^2}+\frac{1}{x}=\frac{6}{x}$



3. $\frac{4}{n+1}+\frac{1}{n^2-5n-6}=\frac{1}{n-6}$



4. $\frac{5}{p+6}-\frac{1}{p^2+6p}=\frac{2}{p^2+6p}$



5. $\frac{5}{x+1}=\frac{6}{x^2-2x-3}+\frac{1}{x-3}$

6. $\frac{k+1}{k}=1-\frac{k^2-3k-4}{4k}$

Let's

Play

Kahoot!