Warm-Up

CST/CAHSEE: _____ Review: Grade

Adding & Subtracting Fractions from an Equation Perspective (Clearing the Denominator)

A method for simplifying an addition or subtraction expression is to set it equal to a variable and turn it into an equation.

cPe f (ew /T T Q q 0.24 0 0 0.24 90 196.08 cm BT 50 0 0 50 0 0 Tm /TT1.0 1 Tf ( ) Tj ET Q q 0.24

We try:

Lead students through the process with questioning.

$\frac{11}{12}-\frac{1}{3}=$

Example #2

$\frac{11}{12}-\frac{1}{3}$

$Let\_x \quad \frac{11}{12}-\frac{1}{3}$

$12\ x \quad 12\left(\frac{11}{12}\right)-12\left(\frac{1}{3}\right)$

$12\ x \quad \left(\frac{12}{1}\ \ \frac{11}{12}\right)-\left(\frac{12}{1}\ \ \frac{1}{3}\right)$

$12x \quad \frac{12\cdot 11}{1\cdot 12}-\frac{4\cdot 3\cdot 1}{1\cdot 3}$

$12x \quad 7$

$\frac{12x}{12} \quad \frac{7}{12}$

$x \quad \frac{7}{12}$

Once I set $\frac{11}{12}-\frac{1}{3}$ equal to x, how do we clear the denominators?
[multiply each term by the LCM]

What is the LCM of 12 and 3? [12]

Now that we've multiplied each term, what do we do now? [factor each term]

Are there any equivalent forms of one?

[—, –, -]

You Try:

Have students work through the next problem independently or in pairs.

You Try:

You Try:

You Try #2:

$$4\frac{1}{4}-2\frac{1}{2}=$$

$$Let\_x=4\frac{1}{4}-2\frac{1}{2}$$

$$x=\frac{17}{4}-\frac{5}{2}$$

$$4(x)=4\ \frac{17}{4}\ -4\ \frac{5}{2}$$

$$4x=\ \frac{4}{1}\bullet\frac{17}{4}\ -\ \frac{4}{1}\bullet\frac{5}{2}$$

$$4x=\ \frac{\cancel{4}\ 17}{1\ \cancel{4}}\ -\ \frac{\cancel{2}\ 2\ 5}{2\ 1}$$

$$4x=17-10$$

$$4x=7$$

$$\frac{4x}{4}=\frac{7}{4}$$

$$x=\frac{7}{4}$$

$$x=\frac{4}{4}+\frac{3}{4}$$

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

Additional You Tries:

Have students work through 2 problems using the Think-Pair-Share strategy. Student A will dictate how to solve as Student B works as the scribe. Student B doesn't talk….only writes. They switch roles for the second you try. Both students must have all work written in their notebooks. Pick students to debrief problems for the class.

You Try #3:

$$- \; - =$$

$$\textit{Let} \quad x = \; - \; -$$

$$x = \; - —$$

$$(x) = \; (\;) - \left(— \right)$$

$$x \; = \; -\left(— \right)$$

$$x = \; -$$

$$x =$$

$$\frac{1}{} x = —$$

$$x = \frac{+}{——}$$

$$x = — + -$$

$$x = \; + -$$

$$x = \; -$$

You Try #4:

$$1\frac{1}{-} \; 1-$$

$$1\frac{1}{-} \; 1-$$

$$\frac{10}{-} \; \frac{11}{-}$$

$$1\,(\;)\;\; 1\;\frac{10}{-} \;\; 1\;\frac{11}{-}$$

$$1 \qquad \frac{1}{1}\;\frac{10}{-} \qquad \frac{1}{1}\;\frac{11}{-}$$

$$1 \qquad \frac{2 \quad 10}{——} + \left(\frac{\cdot \quad \cdot 11}{——} \right)$$

$$1 \quad = 20 +$$

$$1 \quad =$$

$$\frac{1}{1} = \frac{—}{1}$$

$$= \frac{—}{1}$$

$$= \frac{1}{1} + \frac{1}{1} + \frac{1}{1}$$

$$= 1 + 1 + \frac{1}{1}$$

$$= 2\frac{1}{1}$$