Do Now:

Describe and correct the error in the solution of $1.5x + 0.25 = 1.6x$

$1.5x + 0.25 = 1.6x$
$15x + 25 = 16x$
$-15x \qquad -15x$
$25 = x$

$150x + 25 = 160x$
$-150x \qquad -150x$
$25 = 10x$
$\frac{25}{10} = \frac{10x}{10}$
$2.5 = x \qquad \frac{5}{2} \quad 2\frac{1}{2}$

$1.5x + 0.25 = 1.6x$

$15x + \boxed{2.5} = 16x$
$-15x \qquad\qquad -15x$

$\boxed{2.5 = x}$

$1500x + 250 = 1600x$
$15000x + 2500 = 16000x$

$\text{20} \quad -1.258$

$\boxed{0.25}(66 + 42.4h) = 3.1652$

$16.5 + 10.6h = 3.1652$

$165000 + 106000h = 31652$
$-165000 \qquad\qquad -165000$

$106000h = \dfrac{133348}{106000}$

$h = 1.258$

$\begin{array}{r} 49910 \\ 165000 \\ -31652 \\ \hline 133348 \end{array}$

6.3 Solving Equations Involving Fractions and Decimals

7.NS
7.EE

• SWBAT solve equations with fractions and decimals.
• SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

Solving an Equation Involving Fractions

1. Multiply every term by the LCD.
2. Clear the fractions. (Simplify)
3. Solve.

$$\frac{3}{10}x = -\frac{1}{6}x + \frac{7}{10}$$

LCD: 30

$$\frac{9}{1}x\left(\frac{3}{10}x\right)\left(\frac{30}{1}\right) = \left(-\frac{1}{6}x\right)\left(\frac{30}{1}\right) + \frac{7}{10}\left(\frac{30}{1}\right)$$

$$9x = -5x + 21$$

$$\underline{+5x \quad +5x}$$

$$\frac{14x}{14} = \frac{21}{14}$$

$$x = \frac{21 \div 7}{14 \div 7} = \frac{3}{2}$$

$$\boxed{x = \frac{3}{2}} \quad \text{or} \quad \boxed{x = 1\frac{1}{2}}$$

$$\frac{1}{3}a = \frac{20}{21} - \frac{1}{7}a$$

LCD: 21

$$\frac{21}{1}\left(\frac{1}{3}a\right) = \frac{21}{1}\left(\frac{20}{21}\right)\left(-\frac{1}{7}a\right)\left(\frac{21}{1}\right)$$

$$7a = 20 - 3a$$

$$\underline{+3a \qquad +3a}$$

$$\frac{10a}{10} = \frac{20}{10}$$

$$\boxed{a = 2}$$

$$\frac{4}{5}x + 3 = -\frac{7}{10}$$

$$\frac{4}{5}x + \frac{3}{1} = -\frac{7}{10}$$

LCD: 10

$$\frac{10}{1}\left(\frac{4}{5}x\right) + \frac{10}{1}\left(\frac{3}{1}\right) = \frac{10}{1}\left(\frac{-7}{10}\right)$$

$$8x + 30 = -7$$

$$\underline{-30 \quad -30}$$

$$\frac{8x}{8} = \frac{-37}{8}$$

$$\begin{array}{r} 30 \\ +7 \\ \hline 37 \end{array}$$

$$\boxed{x = \frac{-37}{8}} \quad \text{or} \quad \boxed{x = -4\frac{5}{8}}$$

$$2g - 1\frac{1}{4}g = \frac{1}{3}$$

$$\frac{24}{1}\left(\frac{2}{1}g\right) - \left(\frac{5}{4}g\right) = \left(\frac{1}{3}\right)$$

$$48g - 30g = 8$$

$$\frac{18g}{18} = \frac{8}{18}$$

$$g = \frac{8}{1} = \frac{4}{1}$$

$$g = \frac{4}{9}$$

$$\frac{5}{6}v + \frac{5}{8} = \frac{3}{8}v$$

Exit Pass 6.3

At the fabric store, you buy a clothes pattern for $7. You also buy 3/4 yard of red fabric, 2 1/2 yards of purple fabric, and 7/8 yard of blue fabric. The total cost is $23.50. If all three fabrics are the same price per yard, how much do you spend on each fabric?

Reflection of Today's Lesson

6.3 Solving Equations Involving Fractions and Decimals

7.NS
7.EE

• SWBAT solve equations with fractions and decimals.
• SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

Homework

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