

Do Now:

Your school colors are maroon and gold. At a home football game, $\frac{5}{6}$ of the home team fans are wearing maroon, and the rest of the home team fans are wearing gold. There are 35 home team fans wearing gold.

a. Find the fraction of the home team fans who are wearing gold. $\frac{1}{6}$

b. Find the total number of home team fans at the game.

$\frac{1}{6}x = 35$ $x = 210$ 210 home fans

c. One seventh of the home team fans at the game graduated high school last year. How many home team fans graduated last year?

$\frac{210}{7} = 30 \text{ fans}$

Dec 13-7:20 AM

19 $l = \frac{9}{10} \cdot w$

$5 = \frac{9}{10} \cdot w$

$5 = \frac{9}{10} \cdot w$

$w = 5 \frac{10}{9}$

$w = \frac{50}{9} \text{ ft}$

Oct 26-8:09 AM

5.7 Equations and Inequalities with Rational Numbers

- 7.NS.1
- 7.NS.2
- 7.EE

least common denominator

- SWBAT use the LCD to solve equations and inequalities.
- SWBAT understand numbers; understand ways of representing numbers; compute fluently.

- Calculators: No

Oct 26-8:05 AM

Dec 13-7:22 AM

Solve an Equation by Clearing Fractions

1. Find the least common denominator (LCD)
2. Multiply every term by the LCD
3. Simplify
4. Solve for x

Solve the equation by first clearing the fractions.

$\frac{7}{16}x - \frac{3}{8} = \frac{3}{4}$ $\text{LCD: } 16$

$7x - 6 = 12$

$7x = 18$

$x = \frac{18}{7}$

Oct 15-8:11 AM

Dec 13-7:22 AM

$$2 \frac{1}{2} \left(-\frac{5}{6}x \right) + \left(\frac{1}{2} \right) \left(\frac{3}{4} \right) \quad \text{LCD: 12}$$

$$-\frac{10x}{6} + \frac{3}{4} = 9$$

$$\frac{-10x}{-10} + \frac{3}{10} = \frac{9}{10}$$

$$-x + \frac{3}{10} = \frac{9}{10}$$

$$-x = \frac{6}{10}$$

$$x = -\frac{3}{5}$$

Dec 13-7:22 AM

Describe and correct the error.

$$\frac{2}{3}x + 5 = \frac{5}{2} \quad \text{LCD: 6}$$

$$2 \left(\frac{2}{3}x \right) + 6(5) = 6 \left(\frac{5}{2} \right)$$

$$4x + 30 = 15$$

$$4x = 10$$

$$x = \frac{5}{2}$$

Corrected work:

$$4x + 30 = 15$$

$$4x = -15$$

$$x = -\frac{15}{4}$$

Dec 13-7:25 AM

- $\frac{1}{2}x + \frac{7}{10} = \frac{4}{5} \quad x = \frac{1}{5}$
- $\frac{7}{12} = -\frac{2}{3} - \frac{3}{8}x \quad -\frac{2}{3} - \frac{3}{8}x = \frac{7}{12}$
 $x = -\frac{10}{3}$
- $\frac{3}{4}x - \frac{1}{6} = -\frac{2}{9}$

$$\frac{4}{1} \frac{3x}{3} - \frac{2}{6} = \frac{3}{9} - \frac{2}{9}$$

$$-8 = 27x - 6$$

$$-2 = 27x$$

$$x = -\frac{2}{27}$$

Oct 20-12:03 PM

Solve an Equation by Clearing Decimals

Multiply by 10^x , where x is the number of decimals

Oct 15-8:16 AM

Solve the equation by first clearing the decimals. *Move every term 2 decimal places*

$$2.30 = 5.14 + 0.8m$$

$$230 = 514 + 80m$$

$$-284 = 80m$$

$$m = \frac{-284}{80}$$

Reduce

$$m = \frac{-71}{20}$$

Dec 13-7:24 AM

$$2.2w - 3.64 = 8.46$$

$$220w - 364 = 846$$

$$220w = 1210$$

$$w = \frac{1210}{220} = \frac{121}{22} = \frac{11}{2}$$

Dec 13-7:24 AM

Solve the equation by first clearing the decimals.

1. $9.6 - 2.4w = -24$
2. $6.1d + 20.74 = -51.85$
3. $81.9 = 32.76 + 9.1k$

Oct 23-11:01 AM

Exit Pass 5.7

How is solving an equation with terms that are fractions different from solving an equation whose terms only involve integers?



Dec 13-7:27 AM

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the workbook.

Workbook pg. 69 #2-18 evens



Oct 15-8:19 AM

Reflection of Today's Lesson**5.7 Equations and Inequalities with Rational Numbers**

7.NS.1
7.NS.2
7.EE

- SWBAT use the LCD to solve equations and inequalities.
- SWBAT understand numbers; understand ways of representing numbers; compute fluently.

- Calculators: No

Oct 20-12:19 PM

Homework

pg. 256 #13-31 odds only



Dec 13-8:59 AM