

Do Now: Solve the equation

1.) $\frac{4x}{4} = -12$ $x = -3$

2.) $\frac{1}{7} \left(\frac{x}{7} \right) = (-12)$ $x = -84$ $\frac{1}{7} x = -12$

3.) $\frac{4}{7} x = -12$

$\frac{1}{7} \left(\frac{4}{7} x \right) = (-12)$ $\frac{4}{49} x = -12$ $x = -21$

$\frac{4}{7} x = -12$ $x = -21$

Multiply by 4
Divide by 7

Dec 12-7:21 AM

5.6 Using Multiplicative Inverses to Solve Equations

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

- SWBAT use multiplicative inverses to solve equations.
- SWBAT understand numbers; understand ways of representing numbers; compute fluently.

• Calculators: No

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The **multiplicative inverse** of a nonzero number is the number's reciprocal.

Multiplicative Inverse Property

The product of a number and its multiplicative inverse is 1.

Algebra $a/b * b/a = 1$, where $a \neq 0$, $b \neq 0$

Numbers $3/5 * 5/3 = 15/15 = 1$

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Solve the equation.

$\frac{1}{4} \cdot \frac{4}{7} x = -12 \cdot \frac{7}{4}$

$x = -21$

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$\frac{8}{-7} \cdot \frac{-7}{8} k = 56 \cdot \frac{8}{-7}$

$k = -64$

Dec 12-7:26 AM

$$\frac{3}{4}n - 20 = -16$$

$$\frac{3}{4}n = -16 + 20$$

$$\frac{3}{4}n = 4$$

$$n = \frac{4 \cdot 4}{3}$$

$$n = \frac{16}{3}$$

Dec 12-7:27 AM

$$\frac{-11}{15}x + \frac{4}{5} = \frac{1}{3}$$

$$\frac{-11}{15}x = \frac{1}{3} - \frac{4}{5}$$

Common Denominator

$$\frac{-11}{15}x = \frac{5 \cdot 1}{5 \cdot 3} - \frac{4 \cdot 3}{5 \cdot 3}$$

$$\frac{-11}{15}x = \frac{5 - 12}{15}$$

$$\frac{-11}{15}x = \frac{-7}{15}$$

$$x = \frac{-7}{-11}$$

$$x = \frac{7}{11}$$

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$$\frac{13}{16} = \frac{3}{8}g + \frac{1}{2}$$

$$\frac{13}{16} - \frac{1}{2} = \frac{3}{8}g$$

Need to get a common denominator

$$\frac{13}{16} - \frac{8}{16} = \frac{3}{8}g$$

$$\frac{5}{16} = \frac{3}{8}g$$

$$\frac{5}{16} \cdot \frac{8}{8} = \frac{3}{8}g \cdot \frac{8}{8}$$

$$\frac{5}{2} = \frac{3}{1}g$$

$$\frac{5}{3} = g$$

$$g = \frac{5}{3}$$

Dec 12-7:27 AM

Describe and correct the error.

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

$$\frac{-1}{6} \left(-\frac{1}{6}x \right) = \frac{-2}{3} \left(\frac{2}{3} \right)$$

Forgot the negative

$$x = -4$$

$$x = -4$$

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In a college math class, 5/11 of the students are female. The remaining students are male. There are 60 female students in the class. How many male students are in the class?

$$m = \frac{60}{5} \cdot \frac{11}{1}$$

Females Total Amount of students Females


$$m = 132 \text{ total math students}$$

$$132 - 60 = 72 \text{ males}$$

Oct 22-10:00 AM

Exit Pass 5.6

There are currently 1680 students at Fairview Middle School. So far this school year, an average of 3 1/2 new students have enrolled at the school each week. The school has maximum capacity of 1750 students. If this growth rate continues, in how many weeks will the school reach its maximum student capacity?



Dec 12-7:29 AM

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

Working individually or with a partner, complete the workbook.

Workbook pg. 67 #2-26 evens



Dec 13-7:15 AM

Reflection of Today's Lesson

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- SWBAT use multiplicative inverses to solve equations.
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Oct 14-10:11 AM

Homework

pg. 249 #11-29 odds only



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