# Apr. 16, 2018

# Mini-Lesson # 1 (TASK 1, 2 & 3)

## Estimating Fractional Equations

Feb 8-5:24 PM

## Solving Equations with Rational Coefficients

| Grade Eight | Grade Nine |
|---|---|
| **PR2** Model and solve problems using linear equations of the form: <br> • $ax = b$; <br> • $\dfrac{x}{a} = b$, $a \neq 0$; <br> • $ax + b = c$; <br> • $\dfrac{x}{a} + b = c$ $a \neq 0$; <br> • $a(x + b) = c$ <br> concretely, pictorially and symbolically, where $a$, $b$ and $c$ are integers. | **PR3** Model and solve problems using linear equations of the form: <br> $ax = b$; $\quad \dfrac{x}{a} = b, a \neq 0$; <br> $ax + b = c$; $\quad \dfrac{x}{a} + b = c, a \neq 0$; <br> $ax = b + cx$; $\quad a(x + b) = c$; <br> $ax + b = cx + d$; <br> $a(bx + c) = d(ex + f)$; <br> $\dfrac{a}{x} = b, \quad x \neq 0$ <br> where $a, b, c, d, e$ and $f$ are rational numbers. |

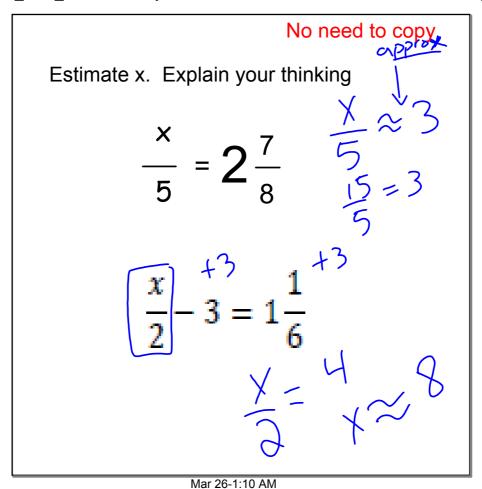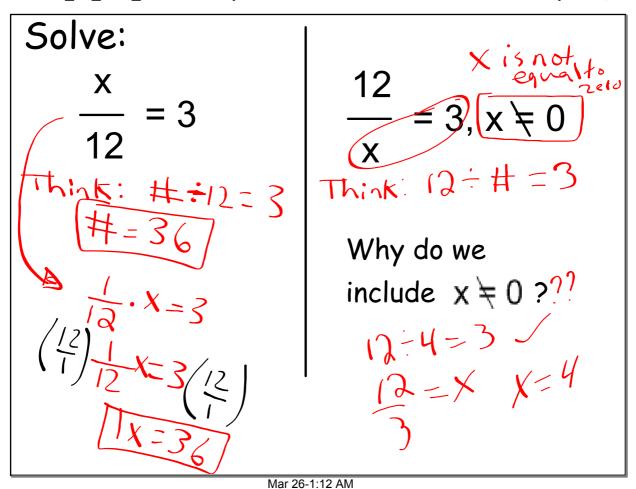| Grade Ten |
|---|
| **A1 Geometry, Measurement and Finance 10** <br> Solve problems that require the manipulation and application of formulas related to perimeter, area, the Pythagorean theorem, primary trigonometric ratios, income <br> **RF10 Number, Relations and Functions 10** <br> Solve problems that involve systems of linear equations in two variables, graphically and algebraically. <br> . |

Mar 26-1:43 AM

Estimate x.  Explain your thinking

<span style="color:red">No need to copy</span>

$$\frac{x}{5} = 2\frac{7}{8}$$

approx

$\frac{x}{5} \approx 3$

$\frac{15}{5} = 3$

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

$+3 \qquad +3$

$\frac{x}{2} = 4$

$x \approx 8$

Mar 26-1:10 AM

Reciprocal:     A number related to another in such a way that when multiplied together their product is one.

$$\frac{1}{6} \bullet \underline{\frac{6}{1}} = 1 \qquad\qquad \frac{2}{3} \bullet \underline{\frac{3}{2}} = 1$$

$\frac{1 \times 6}{6 \times 1} = \frac{6}{6} = 1$          $\frac{2 \times 3}{3 \times 2} = \frac{6}{6} = 1$

$5 \rightarrow \frac{5}{1} \qquad \frac{1}{5}$

Mar 25-8:30 AM

2

Solve:

$$\frac{x}{12} = 3$$

Think: # ÷ 12 = 3

#= 36

$$\frac{1}{12} \cdot x = 3$$

$$\left(\frac{12}{1}\right)\frac{1}{12} x = 3\left(\frac{12}{1}\right)$$

$$1x = 36$$

$$\frac{12}{x} = 3, \quad x \neq 0$$

x is not equal to zero

Think: 12 ÷ # = 3

Why do we include $x \neq 0$ ???

12 ÷ 4 = 3 ✓

$$\frac{12}{3} = x \qquad x = 4$$

Mar 26-1:12 AM

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Your turn. Solve.

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

$$\frac{122}{r} = 3, \quad r \neq 0$$

Think: a # divided by 7 equals 11?     Think: 122 divided by a # equals 3?

Mar 26-12:31 PM

**3**

End of mini-lesson #1

Apr 13-11:39 AM