

Solving Linear Equations with Scary Numbers

(fractions and decimals, mu ha ha)

Learning Goal:

By the end of today, I will be able to use my algebraic solving skills to find the solution to equations that have fractions or decimals.

Solve the following:

$$-2x - 5 = 9$$

Solving Equations

To cancel or eliminate an operation (add, subtract, divide, multiply) in an equation, we can use the opposite operation to undo it, therefore cancelling it out.

Example:

The opposite of adding is subtracting.

The opposite of multiplying is dividing.

The GOAL of "solving" an equation is to get the unknown or variable isolated (on the top with a "1" in front as a coefficient).

Solve the following:

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

Solve the following:

$$\frac{x}{3} + \frac{1}{2} = \frac{5}{6}$$

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Solve the following:

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

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Solve the following:

$$\frac{x+6}{4} = \frac{1+x}{3}$$

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Solve the following:

$$0.5x + 1.8 = -4.8$$

Solve the following:

$$3.6x + 5.6 = -8.8 + 2.4x$$

Questions:

Gr9 Acad - page 221 # 11(a,b,d), 12(a,b,d,f), 13,
challenge 18, 21b, 22a