

MATH NINE WEEK PROJECT

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4th period
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INTRODUCTION

- The knowledge from the past few weeks will be expressed and explained in the next few slides. Definitions of vocabulary and explanations how to solve equations.
- Equation- Solving the equation consists of determining which values of the variable make the equality true.


MULTIPLE INVERSE OF A NUMBER

- multiplicative inverse- the reciprocal of x is $1/x$. In other words, a reciprocal is a fraction flipped upside down. which is the steps of multiplicative inverse

$$4x = \frac{2}{5}$$

step one: divide by 4 and flip

step two: change signs and multiply
step 3: reduce

$$\frac{\cancel{4}}{1} x = \frac{2}{\cancel{5}}$$

$$\frac{2}{5} \times \frac{1}{4} = \frac{2}{20}$$

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ADDITION PROPERTY OF EQUALITY

- The formal name for the property of equality that allows one to add the same quantity to both sides of an **equation**. This, along with the **multiplicative** property of equality, is one of the most commonly used properties for solving **equations**.

$$\begin{array}{r} x - \frac{1}{4} = \frac{2}{5} \\ + \frac{1}{4} \quad + \frac{8}{20} \\ \hline x = \frac{13}{20} \end{array}$$

step one: make even dominators
step two: simplify

SUBTRACTION PROPERTY OF EQUALITY AND MULTIPLICATIVE

- States that when both sides of an equation have the same number subtracted from them the remaining expressions are still equal.
- multiplicative inverse- the reciprocal of x is $1/x$. In other words, a reciprocal is a fraction flipped upside down. which is the steps of multiplicative inverse

$$\begin{array}{r|l} \cancel{15} - \cancel{\frac{2}{3}}x = \cancel{20} & \\ \cancel{-15} & \cancel{-15} \\ \hline \end{array}$$


step one: subtraction property
step two: reciprocal
step three: simplify

$$\cancel{-\frac{2}{3}}x \quad \frac{5}{\cancel{1}} \times \frac{3}{\cancel{2}} = \frac{15}{\cancel{2}}$$

$$x = 7.5$$

DISTRIBUTIVE PROPERTY AND DIVISION PROPERTY OF EQUALITY

- multiply a single term and two or more terms inside a set of parentheses.
- divide both sides of an equation by the same nonzero number, the sides remain equal.


$$5 - 2(x - 3) = -23$$

step one: distribute
step two: 5-6
step three: do the opposite operation on both sides
step four: divide

$$5 - 2x - 6 = -23$$

$$2x - 1 = -23 \quad -23 + 1 = -22$$

$$2x = -22 \quad \text{divide } -22 \text{ by } 2 =$$

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MULTI-STEP EQUATIONS

Paige went to the movies, she bought 5 boxes of candy and bought a drink for \$7 for a large coke. Her total when checking out was \$22. Find X the amount each box of candy.

equation: $5x + \$7 = \22

5 x	+	7	=	22
5 x		-7		-7
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5 x				15
5				5

$x = 3$