Algebra 1 12/5

Warm Up IXL Algebra 1 C.6

2-3 Solving Multi-Step Equations

I can solve equations involving more than one operation

Multi-Step Equation

An equation with more than one operation and requires more than one step to solve

To solve multistep equations we follow PEMDAS backwards or use SADMEP

1. Undo/Remove Addition or Subtraction
2. Undo/Remove Multiplication or Division
3. Undo/Remove Exponents
4. Undo/Remove Parenthesis

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Ex. 1 Solve each equation

A. $2a - 6 = 4$

$+6 \quad +6$

$\frac{2a}{2} = \frac{10}{2}$

$a = 5$

B. $\frac{n+1}{2} = 15$ $\cdot 2$

$n + 1 = 30$

$-1 \quad -1$

$n = 29$

I can solve equations involving more than one operation

Ex. 2 A music store has sold 3/5 of their hip-hop CD's, but 10 were returned. Now the store has 62 hip-hop CD's. How many were there originally?

X = # of Hip Hop CD's

$\frac{3}{5}X - 10 = 62$

$+10 \quad +10$

$\frac{3}{5}X = 72 \cdot \frac{5}{3}$

$X = \frac{360}{3}$

$X = 120$

The store originally had 120 Hip Hop CD's.

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Ex. 3 Len read 3/4 of a graphic novel over the weekend. Monday, he read 22 more pages. If he has read 220 pages, how many pages does the book have?

X = # of pages in the book

$\frac{3}{4}X + 22 = 220$

$-22 \quad -22$

$\frac{4}{3} \cdot \frac{3}{4}X = \frac{198}{1} \cdot \frac{4}{3}$

$X = \frac{792}{3}$

$X = 264$

There are 264 pages in the book

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Consecutive integers

integers that are in counting order such as 4, 5, and 6
writen algebraically as n, n+1, n+2, ...

Number Theory

is the study of numbers and the relationships between them

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Ex 4. Write an equation for the following problem. Then solve the equation and answer the problem.

Find three consecutive integers with a sum of 21

1st 2nd 3rd

$n + n+1 + n+2 = 21$

$3n + 3 = 21$

$-3 \quad -3$

$\frac{3n}{3} = \frac{18}{3}$

$n = 6$

6, 7, 8

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Ex 5. Write an equation for the following problem. Then solve the equation and answer the problem.

Find three consecutive integers with a sum of -51

1st 2nd

$n + n+1 + n+2 = -51$

$3n + 3 = -51$

$-3 \quad -3$

$3n = -54$

$\frac{3n}{3} = \frac{-54}{3}$

$n = -18$

$-18, -17, -16$

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