3.1 – "Solving One-Step Equations"

An **equation** is a number sentence involving an **equal sign**.
It may be true or false or open.

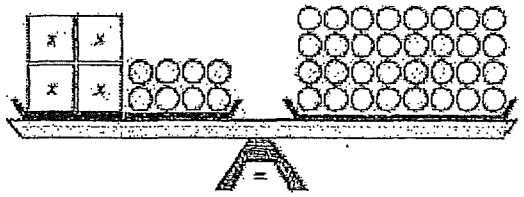
$10 - 3 = 7$ is a _____ equation.

$15 \div 2 = 5$ is a _____ equation.

$x - 4 = 8$ is an _____ equation.

Finding the value of a variable that makes an **open sentence TRUE** is called
→ **SOLVING an EQUATION** or **Finding the ROOT of an EQUATION.**

What equation does the balance model below represent?



How could you figure out x using this model?

To SOLVE an equation, you want to determine what **VALUE** for the variable makes the equation **TRUE.**

THINK of "OPPOSITE OPERATIONS"!!!

What is the opposite operation of:

Addition

Subtraction

Multiplication

Division

Exponent

Ex.1) Solve algebraically.

a) $x + 4 = 13$ b) $x - 8 = 2$ c) $-4 + x = -1$

d) $3y = 18$ e) $\frac{n}{3} = -4$ f) $-v = 9$

Solving Two-Step Equations

When solving a two-step or multi-step equation (tomorrow),
➔ do BEDMAS in reverse at **each step**. **"SAMDEB"**

Ex. 2) Solve algebraically.

a) $2w + 1 = 11$ b) $5n - 18 = 12$

c) $3 - 2y = -7$ d) $\frac{x}{4} + 1 = 11$

e) $\frac{y}{3} - 3 = -6$ f) $\frac{k+2}{4} = -5$

Pg 193 # 3ad, 4cd, 5bc, 6bd, 8cde, 12ad, 13 + worksheet