

# SOLVING EQUATIONS

① DO I HAVE TO DISTRIBUTE?

$$2+5(x+3)-3(x-4)=x+2(2x+4)$$

If you see ( ), multiply the outside #

Combine like terms on each side of =

② DO I HAVE TO CLEAN UP?

$$2+5x+15-3x+12 = x+4x+8$$

③ DO I HAVE VARIABLES ON BOTH SIDES?

$$2x+29 = 5x+8$$

Isolate the variable

Move the #'s to the other side.

④ IS THE VARIABLE ISOLATED?

$$29=3x+8$$

⑤ IS THE VARIABLE MULTIPLIED?

$$21 = 3x$$

Divide to solve for x

$$x=7$$

## PRACTICE EQUATIONS

$$2x-3(x+10)+1=-1+2(x+7)$$

$$2x-3x-30+1=-1+2x+14$$

$$-x-29=13+2x$$

$$-x=42+2x$$

$$-3x=42$$

$$x=-14$$

$$x-6(x-5)=2x+4(x-20)$$

$$x-6x+30=2x+4x-80$$

$$-5x+30=6x-80$$

$$-11x+30=-80$$

$$-11x=-110$$

$$x=10$$

$$1+5(7+3x)=12x+5x$$

$$1+35+15x=12x+5x$$

$$36+15x=17x$$

$$36=2x$$

$$18=x$$

$$x+2(2x+3)-1=\frac{1}{2}(4x+28)$$

$$x+4x+6-1=2x+14$$

$$5x+5=2x+14$$

$$3x+5=14$$

$$3x=9$$

$$x=3$$