

SOLVING EQUATIONS

DO I HAVE TO DISTRIBUTE?

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

MULTIPLY the number outside the bracket by each term inside the brackets

COMBINE LIKE TERMS
(x with x , constants with constants)

DO I HAVE VARIABLES ON BOTH SIDES?

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

DO I HAVE TO CLEAN UP?

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

Pick the lowest variable to bring to the other side.
(Subtract $2x$ from both sides)

IS THE VARIABLE ISOLATED?

$$\frac{21}{3} = \frac{3x}{3}$$

IS THE VARIABLE MULTIPLIED?

$$29 = 3x + 8 - 8$$

Use inverse operation to ADD or SUBTRACT any constants from the variable side.

$$x = 7$$

PRACTICE EQUATIONS

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

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

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

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

$$-29=3x+13$$

$$-29-13=3x+13-13$$

$$-42=3x$$

$$\frac{-42}{3}=x$$

$$-14=x$$

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

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

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

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

$$30=11x-80$$

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

$$\frac{110}{11}=\frac{11x}{11}$$

$$10=x$$

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

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

$$36+15x=17x$$

$$36+15x-15x=17x-15x$$

$$\frac{36}{2}=\frac{2x}{2}$$

$$18=x$$

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

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

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

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

$$3x+5=14$$

$$3x+5-5=14-5$$

$$\frac{3x}{3}=\frac{9}{3}$$

$$x=3$$

* x always needs to be positive *