ADDING

$8 + x = 10$

$9 = x + 5$

THE X IS BEING ADDED

OPPOSITE IS SUBTRACT

SUBTRACTING

$x - 8 = 10$

$\star\ 9 = 12 - x\ \star$

THE X IS SUBTRACTED OR IS SUBTRACTING

OPPOSITE IS ADD

MULTIPLYING

$4x = 24$

$10 = -2x$

THE X IS TOUCHING A NUMBER (MULTIPLY)

OPPOSITE IS DIVIDE

DIVIDING

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

$6 = \frac{x}{3}$

THE X IS BEING DIVIDED (FRACTION)

OPPOSITE IS MULTIPLY

$8 + x = 10$

8 PLUS WHAT IS 10?

2!

OR

DRAW AN = DIVIDER

$8 + x = 10$

$-8 \quad\quad -8$

$0 \quad\quad x = 2$

DO OPPOSITE

DIVIDER LINE. WHAT YOU DO ON ONE SIDE YOU DO ON THE OTHER

$9 = x + 5$

$-5 \quad\quad -5$

$4 = x$

DON'T MOVE X! MOVE EVERYTHING AWAY FROM X

$x = 4$

OPPOSITE OF -8 IS $+8$

$x - 8 = 10$

$+8 \quad\quad +8$

$x = 18$

$x = 18$

$9 = 12 - x$

$-12 \quad\quad -12$

$-3 = -x$

$-1 \quad\quad -1$

$3 = x$

DON'T MOVE X!

MOVE THE 12 AWAY! IT IS POSITIVE SO SUBTRACT

FRACTION BAR MEANS DIVIDE

IN THIS SPECIAL CASE, DIVIDE BY THE -1 IN FRONT OF X

WHAT MULTIPLIED BY 4 IS 24? 6

$\frac{4x}{4} = \frac{24}{4}$

$x = 6$

OPPOSITE OF MULTIPLY IS DIVIDE!

FRACTION BAR MEANS DIVIDE

$\frac{4}{4} = 1$

IT CANCELS OUT AND JUST LEAVES X

$\frac{10}{-2} = \frac{-2x}{-2}$

$-5 = x$

$\frac{-2}{-2} = 1$

IF THE NUMBER BEING MULTIPLIED IS NEGATIVE YOU NEED TO DIVIDE BY A NEGATIVE

WHAT NUMBER DIVIDED BY 2 IS 10? 20!

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

$2 \cdot \frac{x}{2} = 10 \cdot 2$

$x = 20$

$2 \cdot \frac{1}{2} = \frac{2}{2} = 1$

$\cdot$ THIS SYMBOL MEANS MULTIPLY

A FRACTION BAR MEANS DIVIDE!

OPPOSITE OF DIVIDE IS MULTIPLY

$3 \cdot 6 = \frac{x}{3} \cdot 3$

$18 = x$

$3 \cdot \frac{1}{3} = 1$