

# Two-Step Algebraic Equations

$$-2x + 3 = 15$$

$$-2x + 3 = 15$$

$\cdot -2$

$+3$



$$-6$$

$$12$$

$$15$$



$\div -2$

$-3$

$$x = -6$$

check

$$-2(-6) + 3 = 15$$

$$4x - 5 = -45$$
$$+5 \quad +5$$



Must do the same  
on both sides

Vertical  
Method

Solve for X

$$\frac{4x}{4} = \frac{-40}{4}$$

$$x = -10$$

Check

$$4(-10) - 5 = -45$$

$$-40 - 5 = -45$$

$$\checkmark -45 = -45$$

$$8 - X = -16$$

$-1$

$+8$



24

-24

-16



$-1$

$-8$

$$X = 24$$

check

$$8 - (24) = -16$$

$$-16 = -16 \checkmark$$

$$\frac{x}{4} - 6 = 4$$

~~+ 6~~     + 6

~~$\frac{x}{4} = 10 \cdot 4$~~

$$x = 40$$

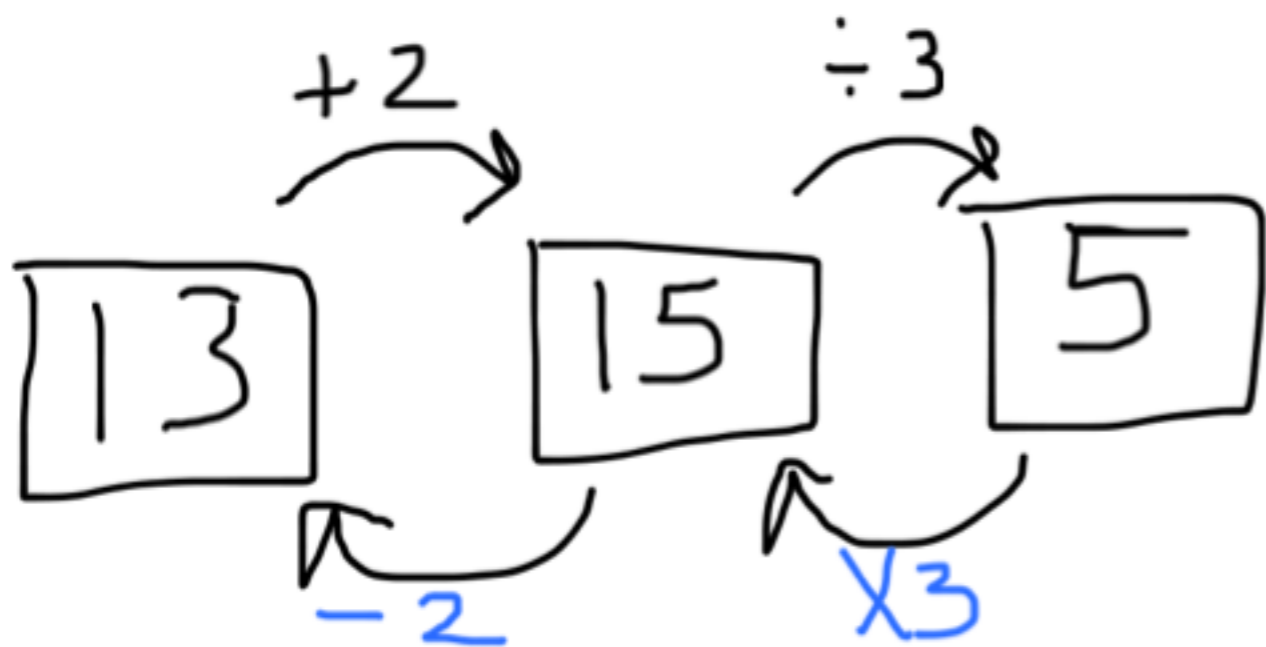
check

$$\frac{(40)}{4} - 6 = 4$$

$$10 - 6 = 4$$

$$4 = 4 \checkmark$$

$$\frac{x+2}{3} = 5$$



$$x = 13$$

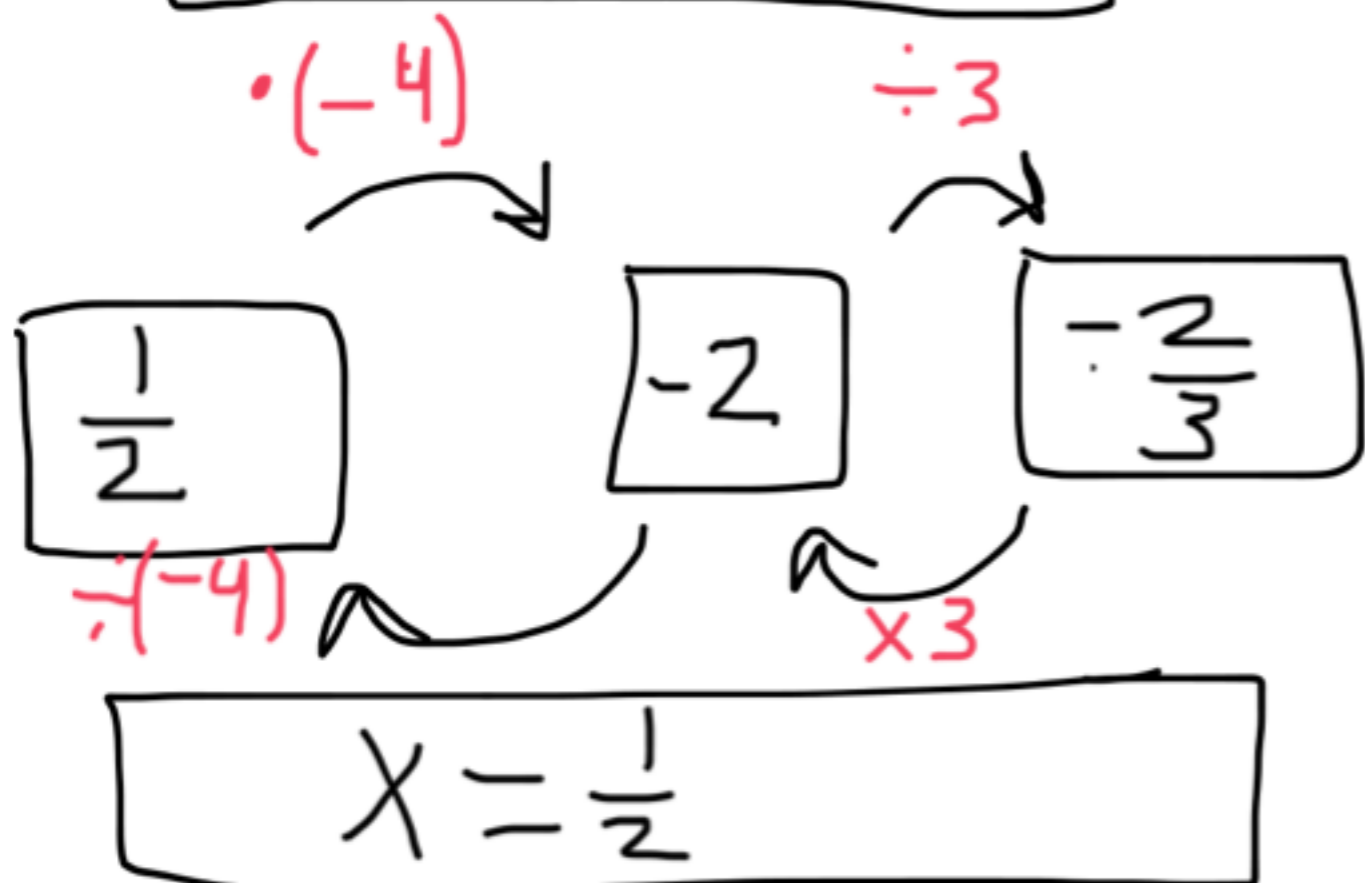
$$\frac{x+2}{3} = 5$$

check

$$\frac{(13)+2}{3} = 5$$

$$\frac{15}{3} = 5$$
$$5 = 5$$

$$\frac{-4x}{3} = \frac{-2}{3}$$



$$\textcircled{-} \frac{4x}{3} = \frac{-2}{3}$$

Vertical



$$\frac{-4x}{3} = \frac{-2}{3}$$

$$-4x = \frac{-2}{3} \cdot 3$$

$$\frac{-4x}{-4} = \frac{-2}{-4}$$

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