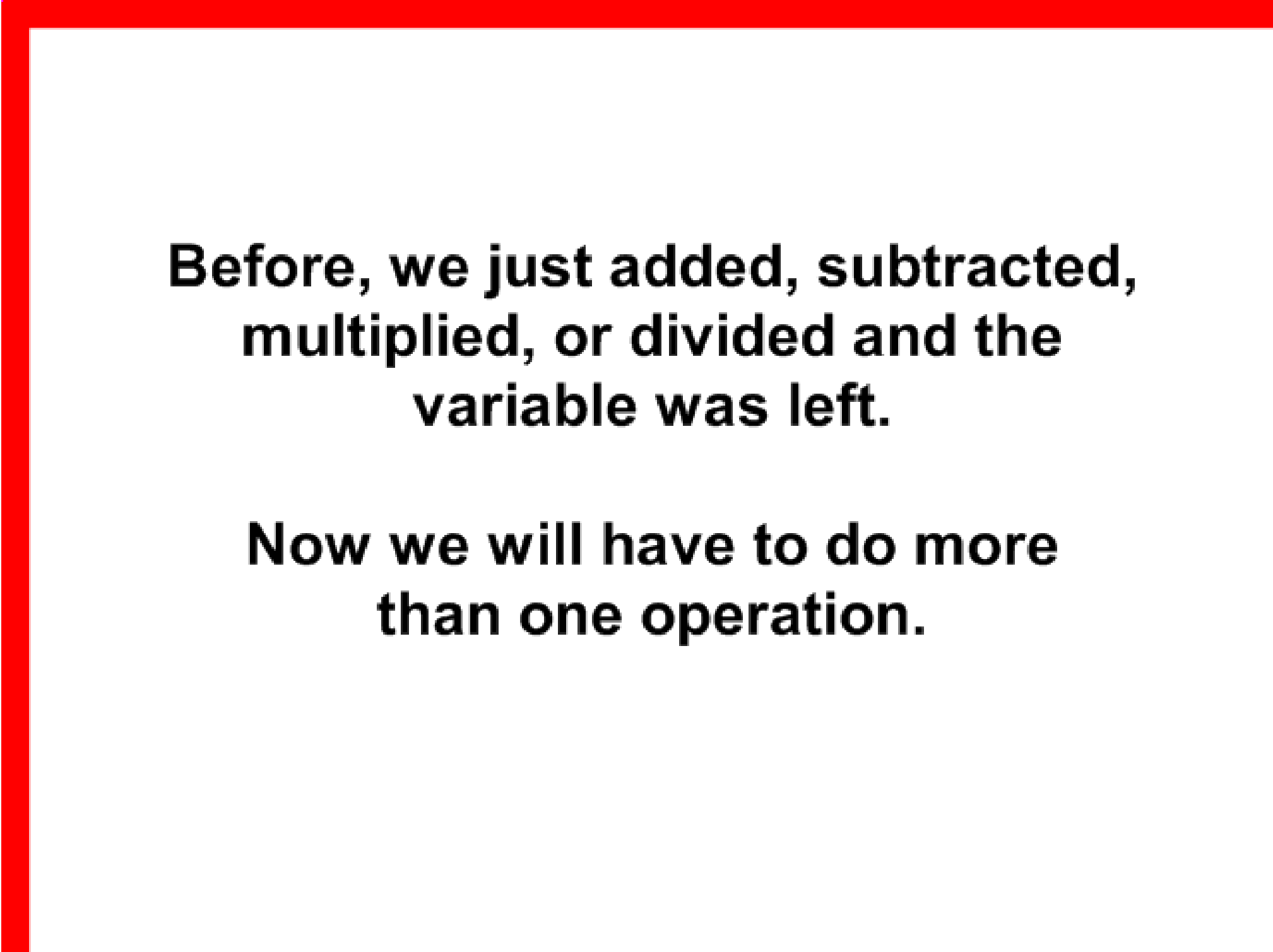


5 - 4

Solve Two-Step Equations



**Before, we just added, subtracted,
multiplied, or divided and the
variable was left.**

**Now we will have to do more
than one operation.**



**Move the number farthest from
the variable first.**

**The number "attached" to the
variable gets moved last.**

$$\text{Ex: } 4x + 7 = 23$$

$$\frac{4x}{4} = \frac{16}{4}$$

$$x = 4$$

$$\text{Ex: } 13 = 3y - 8$$

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

$$7 = y$$

$$\text{Ex: } 3x - 2 = -17$$

$$+2 \quad +2$$

$$\frac{3x}{3} = \frac{-15}{3}$$

$$x = -5$$

Ex: $7(y + 4) = 21$

Method 1:

$$7(y + 4) = 21$$

$$7y + 28 = 21$$

(Note: In the original image, 28 and 21 are crossed out with red lines, and -28 is written below 28 and -21 below 21.)

$$7y = -7$$

(Note: In the original image, 7 is written below both 7y and -7.)

$$y = -1$$

Method 2:

$$\frac{7(y + 4)}{7} = \frac{21}{7}$$

(Note: In the original image, 7 is written below both 7(y+4) and 21.)

$$y + 4 = 3$$

(Note: In the original image, 4 and 3 are crossed out with red lines, and -4 is written below 4.)

$$y = -1$$

Solving Proportions

*** $\frac{a}{b} = \frac{c}{d}$

$$ad = bc$$

Ex: $\frac{n}{16} = \frac{15}{2}$

$$2n = 240$$

$$n = 120$$

Ex: $\frac{20}{n} = \frac{36}{9}$

$$\frac{180}{36} = \frac{36n}{36}$$

$$5 = n$$

Homework

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