

Section 5.6 Notes: Solving Percent Problems

Key Concept: Finding the Percent (Part) of a Number

Method 1: Finding the Percent of a Number with Multiplication

Step 1: Write the percent as a fraction and simplify

Step 2: Multiply the fraction from Step 1 by the given whole number

Step 3: Simplify the multiplication from step 2

Example 1) 25% of 80 is what number?

Step 1: $\frac{25}{100} \div 25 = \frac{1}{4}$

Step 2: $\frac{1}{4} \times \frac{80}{1}$

Step 3: $\frac{1 \times 80}{4 \times 1} \Rightarrow \frac{80}{4} = 20$

Method 2: Finding the Percent of a Number Using a Ratio Table

Use one row of the ratio table to represent the part and a second row to represent the whole. Use equivalent ratios to determine the missing value.

Example 1) 25% of 80 is what number?

Part	25	1	20
Whole	100	4	80

↑ based on given percent
↑ goal/ what you are solving for

Example 2) 90% of 20 is what number?

Method 1:

$\frac{90}{100} \div 10 = \frac{9}{10}$

$\frac{9}{10} \times \frac{20}{1}$

$\frac{9 \times 20}{10 \times 1} \Rightarrow \frac{180}{10} = 18$

Method 2:

Part	90	9	18
Whole	100	10	20

18

Key Concept: Finding the Whole of a Number

Method 1: Finding the Whole of a Number by Multiplication

Divide the part by the percent as a fraction and simplify

Example) 5% of what number is 10?

$$10 \div \frac{5}{100} \div 5$$

$$10 \div \frac{1}{20}$$

$$\frac{10 \times 20}{1}$$

$$\frac{10 \times 20}{1 \times 1} \Rightarrow \frac{200}{1} = 200$$

"Keep-change-Flip"

200

Method 2: Finding the Whole of a Number Using a Ratio Table

Use one row of the ratio table to represent the part and a second row to represent the whole. Use equivalent ratios to determine the missing value

Example) 5% of what number is 10?

Part	5		10
Whole	100		200

200

Example 2) 62% of what number is 31?

Method 1:

$$31 \div \frac{62}{100} \div 2$$

$$31 \div \frac{31}{50}$$

$$\frac{31 \times 50}{31}$$

$$\frac{31 \times 50}{1 \times 31} \div 31$$

$$\frac{1 \times 50}{1 \times 1} \Rightarrow \frac{50}{1} = 50$$

Method 2:

Part	62		31
Whole	100		50

50