

Percent Estimation and Equations

Warmup

1. Write 65% as a fraction in simplest form

2. Write the word each operation refers to in a mathematical sentence.

is: _____

increased by: _____

of: _____

less: _____

3. Four is one-half of what number?

4. Write a percent for each word phrase.

One-third of the amount: _____ One-half of the amount: _____

Twice the amount: _____ Two-thirds the amount: _____

All of something: _____

Three times the amount: _____

5. Solve each Proportion.

$$\frac{x}{7} = \frac{15}{21}$$

- I. Fraction of a Number
- II. Percent of a Number
- III. Solving Percent Equations Use Algebraic Equations
- IV. Solving Percent Equations Using Proportions

I. Fraction of a Number

Of means _____

1. _____

2. _____

3. _____

Compute Mentally

$$\frac{1}{2} \text{ of } 10$$

$$\frac{3}{4} \text{ of } 12$$

$$6. \quad \frac{1}{3} \text{ of } 9$$

$$7. \quad \frac{2}{3} \text{ of } 15$$

8.

II. Percent of a Number

Of means _____

Look for Patterns!

Compute Mentally

1% of 70

40% of 120

9. 25% of 100

10. $33\frac{1}{3}\%$ of 60

11.

III. Solving Percent Equations Use Algebraic Equations

Compute using an algebraic equation.

64% of a number is 12.8

What percent of 10 is 3.2?

To solve a percent equation using an algebraic equation:

1. Change the word sentence to an algebraic equation
is means _____ of means _____
2. Solve for the missing value

12. 28% of a number is 28.28

13. What number is 53% of 45?

14.

IV. Solving Percent Equations Using Proportions

64% of a number is 12.8

32% of 10

Compute using a proportion.

To solve a percent equation using a proportion:

1. Set up a proportion $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$ $\frac{\%}{100}$ *is the value of the percent.*
Do not write the percent sign.
2. Cross multiply. $(\text{of})(\%) = (\text{is})(100)$
2. Solve for the missing value.

15. Complete the proportion with is, of and %

$$\frac{\quad}{100} = \frac{\quad}{\quad}$$

16. 28% of a number is 28.28

17. What number is 53% of 45

18.

19. The following is Edna Jo's Test paper. It is your job to determine if each question is correct, then determine the final score.

Name: Edna Jo	Test #15	Score:
Question	Answer	Grade
1. Write $\frac{2}{5}$ as a decimal.	0.4	
2. What is 70% of 100?	0.7	
3. $5x + 3$ is an algebraic expression. (true or false)	true	
4. $x + 3 < 4$. Solve for x	$x < 1$	

[illegible]