

PERCENTS

The student will be able to:

1. Demonstrate an understanding of number sense, concepts, and operations involving percents.

- Draw a representation of common percentages
- Estimate the percent of a shaded picture
- Change percents to equivalent fractions and decimals
- Demonstrate an understanding that 100% is a whole, percents over 100 are greater than 1 (the whole), percents under 100 are less than 1
- Find the percent of a number
- Find what percent one number is of another
- Find the whole when a percent and part is given
- Calculate percent of increase and decrease
- Use percents to calculate taxes , commissions, and money
- Solve “real life” problems using percents, such as budgets
- Use a calculator to solve percent computations

2. Apply appropriate strategies to solve word problems using percents.

- Read the problem several times
- Personalize the problem
- Draw a picture or diagram to help solve the problem
- Eliminate extraneous information
- Use estimation to solve problems and assess the reasonableness of the answer
- Use ratio and proportion to solve word problems involving percent
- Determine the number of steps and operations needed to solve the problem- *Students will often stop after the first step, leading them to choose the wrong answer.*
- Determine if the answer makes sense

Recommendations for teaching percents:

- Have students brainstorm the ways we use percents in “real life”
- Use multiple visual representations to help students understand percent
- Teach a variety of methods for problem solving with percents. Some students work best with equations and formulas; others may find proportions a more useful strategy. Include lots of charts and graphs when working with percents
- Use lessons that incorporate real life, such as finding percent off when shopping, finding commission, calculating simple interest, and taxes
- It’s helpful for students to memorize common percents and their fractional and decimal equivalents (50%, 25%, 75%, $33\frac{1}{3}\%$, $66\frac{2}{3}\%$, 10%)
- Have students generate their own word problems and have others solve

Essential Percent Vocabulary

Percent: a part of the whole that is divided into 100 equal parts
25 percent is 25 parts out of 100

Percent of decrease: the percent by which a value has gone down

Percent of increase: the percent by which a value has gone up

Percent Box

Is / Part	%
Of / Whole	100

Name _____

Date _____

Percents Assessment

Write each percent as a fraction in simplest form..

1. 50%	2. 5%	3. 10%	4. 90%	5. 100%
--------	-------	--------	--------	---------

Write each percent as a decimal.

6. 35%	7. 60%	8. 4%	9. 55%	10. 8%
--------	--------	-------	--------	--------

Find 10% of each number. Round to the nearest hundredth.

11. \$13.00	12. 95	13. \$5.50	14. 21	15. \$8.00
-------------	--------	------------	--------	------------

Find the percent of each number. Round your answer to the nearest hundredth.

16. 50% of 80	17. 75% of 82	18. 40% of \$75.00
19. 5% of 20	20. 8% of 63	21. 100% of 150

Find the whole.

22. 40 is 50% of what number?	23. 8 is 10% of what number?
24. 30 is 25% of what number?	25. 25 is 75% of what number?

Find what percent one number is of another.

26. 40 is what percent of 80?	27. 6 is what percent of 24?
28. 15 is what percent of 20?	29. 12 is what percent of 60?

30. A new TV cost \$245.00. There is a 5% sales tax. How much is the sales tax ? _____ What was the total cost ? _____
31. Wisline bought a pink jacket on sale. The original cost of the jacket was \$250.00. She got a 60% discount. What did she pay for the jacket ?
32. Maritza went out to eat with 2 of her friends. The bill come to \$28.00. They paid an additional 8% tax and left a 20% tip. What was the total cost of the meal ?
33. Jamie earns \$350.00 dollars a week (gross pay). 20% is taken out for deductions. What is her net pay ?

Student Inventory Percents

Name _____

Date _____

Answer each question below by putting a check mark after Yes or I need more work. If you check yes, prove it by answering the question.

1. I can change a percent to a decimal.

Change 8% to a decimal number. _____

Yes _____ I need more work _____

2. I can change a percent to a fraction.

Change 80% to a fraction. _____

Yes _____ I need more work _____

3. I can find the percent of a number.

Find 15% of 125. _____

Yes _____ I need more work _____

4. I can find what percent one number is of another.

12 is what percent of 60? _____

Yes _____ I need more work _____

5. I can find the whole when a percent and part is given.

50% of what number is 40? _____

Yes _____ I need more work _____

6. I can find the percent of increase and decrease.

Find the percent of increase from 25 to 40? _____

Yes _____ I need more work _____

7. I can answer one-step percent word problems.

Yes _____ I need more work _____

8. I can answer multi-step percent word problems.

Yes _____ I need more work _____

BE SURE THAT YOU PRACTICE A LOT OF WORD PROBLEMS !!!