Name_____ Date_____

Percentages

The term "percent" comes from Latin and means "for every hundred." When you hear a statistic, such as 10% of people with blond hair have blue eyes, this means that for every 100 people with blond hair, 10 of them have blue eyes.

You may have heard of commercials for toothpaste that say "recommended by 4 out of 5 dentists." What percentage of dentists is this? We would need to determine what 4/5 of 100 is. We can use the following formula to find our answer:

$$(\text{amount} \div \text{total}) \times 100 = \text{percentage}$$

We would then sill in our formula to say:

$$4 \div 5 \times 100 = .8 \times 100 = 80.0 \text{ or } 80\%$$

We have now solved our problem and determined that 4 out of 5 dentists actually means 80 % of dentists.

Sometimes, decimals need to be converted to percentages. As stated above, percent means per 100. This can also mean "divided by 100." Dividing by 100 moves the decimal point two places to the left. For example, 25% = 25/100 = .25. Changing a number back to its percentage is relatively simple. You multiply the number by 100 (which is the same as moving the decimal point two places to the right). For example, .30 = .30 X 100 = 30%.

In addition, we will sometimes need to convert fractions into percentages. In order to do this, we would take our fraction and multiply it by 100. We would then see how many times our answer goes into 100. For example:

$$1/5 \text{ X } 100 = 5$$

5 goes into 100? 20 times (100 divided by 5 = 20)

Our percent is 20%. In other words, 1/5 of 100 is the same as 20%.

If you need to change a percent into a fraction, the process is the opposite. You would divide the percentage by 100 and simplify the fraction if possible. For example:

$$40\% = \frac{40}{100} = \frac{2}{5}$$

In other words, 40 % is the same as two-fifths.

There are many uses of percentages. It is important to learn how to use them so you can understand things like test scores, sales at stores, or tipping in restaurants.

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Percentages Questions

1. If we say that ¼ of the class received a perfect score on their test, what percentage of the class received a perfect score? (You can use the space below to calculate your answer.) _____

Please convert the following decimals into percentages:

2. .29 _____
3. .81 _____
4. .11 _____
5. .42 _____
6. .33 _____

Please convert the following percentages into decimals:

7. 10% _____
8. 25% _____
9. 50% _____
10. 75% _____
11. 100% _____

Please convert the following percentages into fractions (You can use the space provided to calculate your answer):

12. 30% _____

13. 25% _____

14. 50% _____

Name_____ Date_____

Percentages Answers

1. If we say that ¼ of the class received a perfect score on their test, what percentage of the class received a perfect score? (You can use the space below to calculate your answer.) ____25%_____

Please convert the following decimals into percentages:

2. .29 ____29%_____
3. .81 ____81%_____
4. .11 ____11%_____
5. .42 ____42%_____
6. .33 ____33%_____

Please convert the following percentages into decimals:

7. 10% ___.10_____
8. 25% ___.25_____
9. 50% ___.50 or .5_____
10. 75% ___.75_____
11. 100% ___1.00_____

Please convert the following percentages into fractions (You can use the space provided to calculate your answer):

12. 30% $\frac{30}{100}$

13. 25% ¼

14. 50% ½

Name_____ Date_____

Percentages Objectives

LESSON SUMMARY:

This lesson explains percentages.

OBJECTIVES:

- To be able to convert a decimal to a percent.
- To be able to convert a percent to a decimal.
- To be able to convert a percent to a fraction.

SUGGESTED GRADE LEVEL(S):

Grades 3 through 5.

SUBJECT AREA:

Math