Write Percents as Decimals

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3.2 Write Percents as Decimals

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[Figure 1]

Mina works at a poultry processing plant that also cooks chicken. One pound of chicken cooked without the skin contains about 0.07 pounds of fat. How can Mina assess what percent of cooked chicken is fat and what percent is not?

In this concept, you will learn to write percent as decimals.

Percents as Decimals

A **percent** is a part of a whole. It is a ratio compared to 100. Fractions and decimals are parts of a whole too. Since this is true, you can interchange the form that you write these quantities in. You can write a fraction as a decimal and as a percent. You can also write a percent as a decimal or a decimal as a percent and you can do the same with the fractions too.

Let's start by writing percent as decimals and decimals as percent. Decimal places represent powers of ten. The second decimal place is the hundredths place. The decimal 0.18 means eighteen-hundredths.
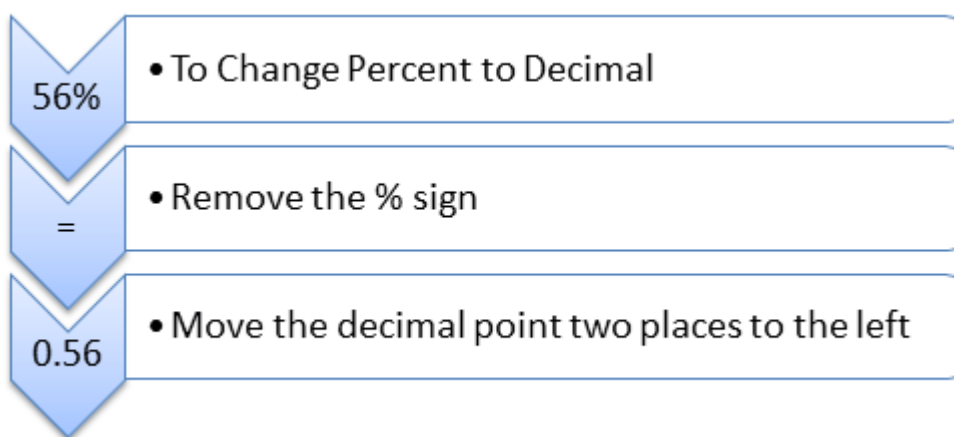
Let's look at an example.

Write 56% as a decimal.

First, you know that the % sign means "out of 100" or that the denominator of the fraction formed from the decimal is 100. You can say that decimal places represent tens and hundreds too. Two decimal places represents hundreds, just like the percent sign, %, represents hundreds.

To change a percent to a decimal, you move the decimal point two places to the left and remove the percent sign.

$$56\% = 0.56$$

56%	• To Change Percent to Decimal
=	• Remove the % sign
0.56	• Move the decimal point two places to the left

[Figure 2]

Let's look at a few more examples

Write 88% as a decimal.

To change a percent to a decimal, you move the decimal point two places to the left and remove the percent sign.

$$88\% = 0.88$$

Write 125% as a decimal.

To change a percent to a decimal, you move the decimal point two places to the left and remove the percent sign.

$$125\% = 1.25$$

You can work the other way around too and write decimals as percent. Here you will move the decimal point two places to the right and add a percent sign.

Let's look at an example.

Write 0.45 as a percent.

First, you move the decimal point two places to the right. and next add a percent sign.

$$0.45 = 45$$

Next, add a percent sign.

$$
\begin{aligned}
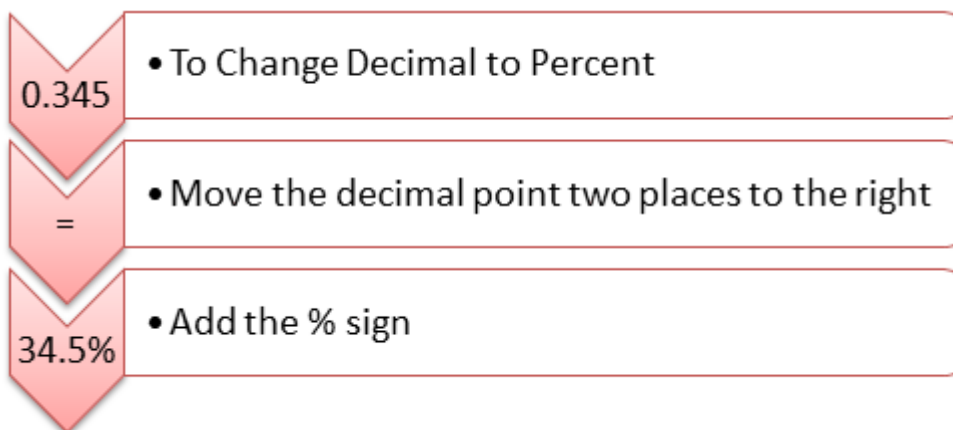0.45 &= 45 \\
&= 45\%
\end{aligned}
$$

Write 0.345 as a percent.

First, you move the decimal point two places to the right.

$$0.345 = 34.5$$

Next, add a percent sign.

$$
\begin{aligned}
0.345 &= 34.5 \\
&= 34.5\%
\end{aligned}
$$

0.345

=

34.5%

• To Change Decimal to Percent

• Move the decimal point two places to the right

• Add the % sign

[Figure 3]

Examples

Example 1

Earlier, you were given a problem about Mina and her chickens.

Mina needs to figure out the percent of fat in one pound of cooked chicken given that 0.07 pounds is fat.

First, convert this amount of fat to a percent. When converting a decimal to a percent, you move the decimal point two places to the right then add the percent sign.

$$0.07 = 7\%$$

Next, answer the question "What percent is not fat?" The amount of fat and the amount that is not fat must add to give you 100%. So subtract the percentage of fat from 100.

$$100\% - 7\% = 93\%$$

The answer is 7% and 93%. The 7% represents the percent of fat in the cooked chicken. The 93% represents the percent of chick that is not fat.

Example 2

Write 0.455 as a percent.

First, when converting a decimal to a percent, you move the decimal point two places to the right. This represents the hundredths that are shown with a percent sign.

$$0.455 = 45.5$$

Next, add a percent sign.

$$
\begin{aligned}
0.455 &= 45.5 \\
&= 45.5\%
\end{aligned}
$$

The answer is 45.5%.

Write each example as a decimal or a percent.

Example 3

0.48

First, notice that this is in decimal form and thus you need to change it to a percent. When converting a decimal to a percent, you move the decimal point two places to the right. This represents the hundredths that are shown with a percent sign.

$$0.48 = 48$$

Next, add a percent sign.

$$0.48 = 48\%$$

The answer is 48%.

Example 4

57.5%

First, notice that this is in percent form and thus you need to change it to a decimal. When converting a percent to a decimal, you first remove the percent sign.

$$57.5\% = 57.5$$

Next, move the decimal point two places to the left.

$$57.5\% = 0.575$$

The answer is 0.575.

Example 5

0.18

First, notice that this is in decimal form and thus you need to change it to a percent. When converting a decimal to a percent, you move the decimal point two places to the right.

$$0.18 = 18$$

Next, add a percent sign.

$$0.18 = 18\%$$

The answer is 18%.

Review

Write the following percent values as decimals.

1. 18%

2. 35.7%

3. 6.09%

4. 0.008%

5. 0.028%

6. 0.9%

7. 31.5%

8. 12.3%

Write the following decimals as a percent.

9. 0.52

10. 0.02

11. 1.17

12. 5

13. 0.09

14. 0.876

15. 0.3

16. 0.0001

Review (Answers)

To see the review answers, return to the Table of Contents and select 'Other Versions' or 'Resources'.

Resources

https://flexbooks.ck12.org/flx/render/embeddedobject/166456

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