**Lesson 7**

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| Topic Goal: Percentage |

Percent ( % ) means out of “100”.

5 percent (5%) means 5 out of 100.



27 percent (27%) means 27 out of 100.



1. Percent can be represented in **fraction** form.

5 percent = 5% = $\frac{5}{100}$

2. Percent can also be represented in **decimal** form.

*Remember that the line that separates the numerator and the denominator means to divide.*

5 percent = 5% = $\frac{5}{100}$ = 5 $÷$ 100 = 0.05

3. Finally, you can represent a **decimal** as a percent by simply multiplying the decimal by 100.

0.36 $× 100\%=\left(0.36 × 100\right)\%$

 = 36%

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| Example(s):  |

Fill in the blanks with the help of your teacher.

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| --- | --- | --- |
| % | Fraction | Decimal |
| 76% | $$\frac{76}{100}$$ | 76 $÷$ 100 = 0.76 |
| 17% |  |  |
|  | $$\frac{43}{100}$$ |  |

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|  Practice Questions:  |

1. Write each fraction as a percentage.
	1. $\frac{12}{100}$ b. $\frac{75}{100}$

c. $\frac{27}{100}$ d. $\frac{4}{100}$

1. Write each percentage as a fraction.

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| --- | --- |
| a) 3 % = \_\_\_\_\_\_\_\_\_\_\_ | b) 11% = \_\_\_\_\_\_\_\_\_\_\_\_ |
| c) 21% = \_\_\_\_\_\_\_\_\_\_\_ | d) 2% = \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| e) 98% = \_\_\_\_\_\_\_\_\_\_\_ | f) 66% = \_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Write each decimal as a percentage.

a. 0.55 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. 0.09 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. 0.4 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d. 0.12 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Extension****: “Percent of a number”*

You’ll need to know how to calculate the percent of a number in the following units when you are determining the sales prices of an item. So let’s learn the basics.

In math the word “**of**” means to multiply.

Here’s an example:

What is 20% of 80?

**step 1:** convert the percent into a decimal

20% = $\frac{20}{100}$ = 20 $÷$ 100 = 0.20

**step 2:** multiply the decimal by the number in the question

0.20 $×$ 80 = 16

Therefore, 20% of 80 is 16.

Let’s practice our new skill.

1. Calculate the percent of each number.
	1. 17% of 87
	2. 32% of 55
	3. 11% of 176
	4. 50% of 40
	5. 75% of 100

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|  Assessment:  |

**Part A: Multiple Choice**

Circle the best answer in each question.

1. Which of the following percentages is equal to 0.45?

1. 0.045%
2. 0.45%
3. 4.5%
4. 45%
5. 0.0045%

2. Which of these percentages equals 1.25?

1. 0.125%
2. 12.5%
3. 125%
4. 1250%
5. 1250.5%

3. 25% of 400 =

1. 100
2. 200
3. 800
4. 10,000
5. 12,000

Part B: Short answer

* 1. What is 37% as a fraction?
	2. What is 16 as a percent?
	3. What is 37.25% as a decimal?
	4. What is 0.005 expressed as a percent?

Part c: Fill in the blanks

Complete the table below by filling in the blanks.

|  |  |
| --- | --- |
| **Percent form** | **Decimal form** |
| 20% |  |
|  | 0.15 |
| 220% |  |
| 3.24% |  |
|  | 0.0765 |