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UNIT 5 LESSON 7

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| AIM: | SWBAT calculate percents |

**THINK ABOUT IT!**

In Stephanie’s class, there are 4 girls for every 20 students. Stephanie started to create a double number line diagram to help her determine the percent of students in her class that are girls, below. Help Stephanie finish the double number line diagram and determine the percent of students in her class that are girls. Explain.

Percent

Students

0

0%

100%

20

4

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Key Point

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| A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ratio can be represented with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ using a double number line. |

**Interaction with New Material**

Ex.1) A survey was taken that asked participants whether or not they were happy with their jobs. An overall score was given. 100 of the participants were unhappy while 300 of the participants were happy with their job. What percent were happy with their job?

* **CFS for top quality work**
  + Annotated with *numbers* circled and *terms* underlined
  + ***Double Number Line*** is drawn accurately and is clearly labeled
  + Work is shown
  + Answer statement is written

**PARTNER PRACTICE**

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| *Bachelor Level* |

1. Eleanor wants to write a percent that relates to the part-to-total ratio of 2:5. Use a double number line diagram to relate the ratio to a percent.

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1. Rita took a 20 question quiz and got 2 problems incorrect. Select all of the answers below that apply to the quiz.

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  + Answer statement is written

a) The part-to-total ratio is 20:2

b) The part-to-total ratio is 1:10

c) Rita got 10% of the questions incorrect

d) Rita got 90% of the questions correct

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| *Master Level* |

1. Maria worked for a total of 10 hours. She finished 7 hours by 3 PM. What percent of her work day had she completed by 3 PM?

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1. By 3 PM, Matthew had completed 6 hours of his work day. If he has 2 more hours left to work in his day, what percent of his work day had he completed by 3 PM?

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**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. Erica has a bowl of skittles that has 5 red skittles for every 25 skittles. What percent of her skittles are red?

* **CFS for top quality work**
  + Annotated with *numbers* circled and *terms* underlined
  + ***Double Number Line*** is drawn accurately and is clearly labeled
  + Work is shown
  + Answer statement is written

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1. Write the part-to-total ratio of 2:40 as a percent using a double number line diagram.

* **CFS for top quality work**
  + Annotated with *numbers* circled and *terms* underlined
  + ***Double Number Line*** is drawn accurately and is clearly labeled
  + Work is shown
  + Answer statement is written

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| *Master Level* |

1. On last week’s quiz, Andre got 18 questions correct and 2 questions incorrect. Read each question below and determine whether it is “True” or “False.”

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| Andre got 16 questions correct |  |  |
| The part to total ratio for questions correct to total is 16:18 |  |  |
| Andrew got a 10% on the quiz |  |  |
| Andrew got a 90% on the quiz |  |  |

1. Sydney thinks that 60% relates to the part-to-total ratio 18:30. Do you agree or disagree with her claim? Explain.

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1. Which of the part-to-total ratios below relate to 30%? Select all that apply.
   1. 3:10
   2. 30:60
   3. 150:500
2. At AF Bridgeport Middle School, there are 240 girls and 160 boys. What percent of all the students are girls?
3. Write a real world problem that can be modeled and solved using the model below.



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| *PhD Level* |

1. The AF Brooklyn High School’s basketball coach kept track of a number of different stats throughout last season. She noted the stats in the table below.

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| --- | --- | --- |
| **Type of Shot** | **Number Made** | **Number Missed** |
| Lay-up | 80 | 120 |
| Free-throw | 160 | 40 |
| Jump shot (2 pt.) | 120 | 80 |
| Jump shot (3 pt.) | 40 | 160 |

Part A: What percent of all shots that were made were free-throws?

Part B: What percent of all the jump shots taken were missed?

Part C: What percent of all shots that were taken were free-throws that were made?

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there. | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there. | You need more practice and feedback. |

1. Convert the part-to-total ratio to a percent using a double number line diagram
2. 1,000 people were given a survey about their favorite pizza place in NYC. 200 said Lombardi’s and the rest said Patsy’s.
   1. What percent of the people surveyed said Lombardi’s?
   2. What percent of the people surveyed said Patsy’s?