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**Lesson: Part to Whole Ratio (Fraction) as Percent**

**![MC900320956[1]]()![MC900320956[1]]()**1. Sam says $50$% of the vehicles are cars.

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a. Give a reason to prove or disprove Sam’s statement.

b. How is the fraction of cars related to the percent?

c. Use a model (10 by 10 grid) to prove that the fraction and percent are equivalent.

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d. What other fractions or decimals also represent $60\%$?

2. A survey was taken that asked participants whether or not they were happy with their job. An overall score was given. $300$ of the participants were unhappy while $700$ of the participants were happy with their job. Give a part-to-whole ratio (fraction) for comparing happy participants to the whole. Then write a part-to-whole fraction of the unhappy participants to the whole. What percent were happy with their job, and what percent were unhappy with their job?

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| --- | --- |
| Happy | Unhappy |
| Fraction | Percent | Fraction | Percent |
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a. Use the 10 x10 grid model to justify your answer.

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3. Renata claims that a score of $80\%$ means that she answered $\frac{4}{5}$ of the problems correctly. She drew the following picture to support her claim:

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a. Is Renata correct? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Why or why not?

b. How could you change Renata’s picture to make it easier for Renata to see why she is correct or incorrect?

4. Use the **tape diagram** to answer the following questions.



$80\%$ is what fraction of the whole quantity?

$\frac{1}{5}$ is what percent of the whole quantity?

$50\%$ is what fraction of the whole quantity?

$1 $is what percent of the whole quantity?

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_\_\_

**HOMEWORK: Fractions as a Percent**

1. Maria completed $\frac{3}{4}$ of her workday. Create a **tape diagram** to represents what percent of the workday Maria has worked.

a. What percent of her workday does she have left?

b. How does your model prove that your answer is correct?

Complete the conversions from fraction to decimal to percent.

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| --- | --- | --- |
| **Fraction** | **Decimal** | **Percent** |
| $$\frac{1}{20}$$ |  |  |
|  | $$0.35$$ |  |
|  |  | $$84.5\%$$ |
|  | $$0.325$$ |  |
| $$\frac{2}{25}$$ |  |  |