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Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Lucy has two pet rats and they love to eat cheese. One of Lucy’s pet rats, Ricky, ate 1/6 of a block of cheese for lunch. Her other pet rat Ruby ate 3/8 of a block of cheese for lunch. Which rat ate more cheese? How much cheese did the two rats eat altogether?

Justify your solution with numbers, pictures, and/or words.

Using what you learned from our discussion about the Ricky and Ruby Rat problem, solve these number sentences.

Justify your solution with pictures, numbers, and/or words.

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| --- | --- | --- |
| 1/9 + 4/7 = | 1/3 + 2/7 = | 2/8 + 1/6 = |

* What standards does this lesson address?
  + 5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*
  + For an excellent description about how other teachers have addressed this standard (including classroom discussions and additional problems) see Chapter 2 and Chapter 8 in your book Extending Children’s Mathematics: Fractions and Decimals by Empson and Levi.
* Why were these number sets chosen for this problem?
  + The number set for the Ricky and Ruby Rat problem is 3/8 + 1/6. This number set was chosen because the denominators have no common factor (other than one). This means that students will have to replace both fractions with an equivalent fraction to find the sum. (See page 185 in Extending Children’s Mathematics for further explanation of the sequence of these number choices).
  + Each of the follow up number sentences deals with a similar situation. The denominators in each number sentence have no common factor (other than 1). Therefore, it will be necessary to find an equivalent fraction for both fractions in the number sentence.
  + All of the denominators in the Ricky and Ruby Rat problems are thirds, sixths, sevenths, eighths, or ninths – these denominators were chosen because while they still allow for students to draw a model to solve the problem and/or explain their thinking, they really push students to a more efficient strategy – using mental calculations to find equivalent fractions.
* What are some expected student strategies and misconceptions? How can I address these strategies and misconceptions in our class discussion?

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| Number Set | Possible Student Strategies and Misconceptions | Possible Ways to Address Strategies and Misconceptions in Class Discussion |
|  | Coming Soon! |  |