Lesson 8: Applying the Properties of Operations to Add and Subtract Rational Numbers

Problem Set

1. Represent each sum as a single rational number.

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Rewrite each of the following to show that *the opposite of a sum is the sum of the opposites.* Problem 2 has been completed as an example.

Use your knowledge of rational numbers to answer the following questions.

1. Meghan said the opposite of the sum of and is . Do you agree? Why or why not?
2. Jolene lost her wallet at the mall. It had in it. When she got home, her brother felt sorry for her and gave her . Represent this situation with an expression involving rational numbers. What is the overall change in the amount of money Jolene has?
3. Isaiah is completing a math problem and is at the last step: . What is the answer? Show your work.
4. A number added to its opposite equals zero. What do you suppose is true about *a sum added to its opposite*?

Use the following examples to reach a conclusion. Express the answer to each example as a single rational number.