

Bicycles and Tricycles

Lesson Plan

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The Task

Jenny's Bicycle Shop sells only bicycles and tricycles. They have a total of 24 seats and 61 wheels in the shop. How many bicycles and how many tricycles are in the shop?

Materials

- The task
- Pictures of a bicycle and tricycle
- Large presentation paper per group

Facilitating Task

- Begin by sharing pictures of a bicycle and tricycle.
- Read the problem together. Have students retell the problem in their own words.
- Provide individual work time for students to begin finding possible solutions.
- Form small groups (4 students maximum) to compare strategies and solutions. After reaching consensus as a group, record solution and justification on Presentation Paper.
- Each group shares and justifies their solution to the class.
- As groups share, the teacher asks questions to support students in connecting the strategies shared and the mathematical ideas highlighted.

Misconceptions

- Students may be confused by the constraints. Students may add bikes and trikes before multiplying, added just the wheels, or multiplied bikes times trikes.
- Students may solve the problem and not consider all constraints.

Suggested Prompts or Questions

- How does your solution make sense to you?
- How is your strategy similar to another strategy that someone used?
- What do you know about the problem?