

Bicycle Tires

There are 4 bicycles in front of the school. How many tires are there all together on the bicycles? Show and tell how you know.

Bicycle Tires

Counting and Cardinality Unit

Mathematical Processes: K.1A, K.1E

Task

There are 4 bicycles in front of the school. How many tires are there all together on the bicycles? Show and tell how you know.

Alternative Versions of the Task

More Accessible Version:

There are 3 bicycles in front of the school. Each bicycle has 2 tires. How many tires are there all together on the bicycles? Show and tell how you know.

More Challenging Version:

There are eight bicycles in front of the school. How many tires are there all together on the bicycles? Show and tell how you know.

TEKS Unit of Study and Evidence

Counting and Cardinality Unit

The Counting and Cardinality Unit involves understanding numbers and how they are used to name quantities and to answer questions, such as:

- How many balls is the clown juggling?
- Do you have enough cups for each member of your group to have one?

Exemplars Task-Specific Evidence

This task requires students to count to answer “how many.” Students also need to have number sense to eight.

Underlying Mathematical Concepts

- Number sense to 8
- Counting on/Addition
- 2 to 1 (2 tires to 1 bicycle)

Possible Problem-Solving Strategies

- Model (manipulatives)
- Diagram/Key
- Tally chart
- Table

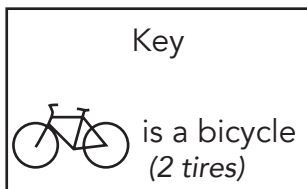
Possible Mathematical Vocabulary/Symbolic Representation

- Model
- Diagram/Key
- Tally chart
- Table
- Pair
- Per
- Odd/Even
- More than (>)/Greater than (>)/Less than (<)
- Equivalent/Equal to
- Total/Sum
- Sets
- Pattern
- 1st, 2nd, 3rd, 4th
- Amount
- Double

Possible Solutions

Original Version:

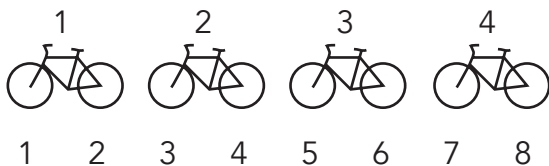
There are 8 tires.



Bicycle	Tires
1	2
2	2
3	2
4	2

Bicycle	Tires
1	
2	
3	
4	

$$2 + 2 + 2 + 2 = 8$$



Bicycle	1	2	3	4
Total Tires	2	4	6	8

More Accessible Version:

There are 6 tires.

More Challenging Version:

There are 16 tires.

Possible Connections

Below are some examples of mathematical connections. Your students may discover some that are not on this list.

- Patterns: Bike +1, Tires +2.
- 2 tires is a pair.
- 2 tires is an even number.
- There are more tires than bikes.
- The student adds more bikes to extend the task.
- Relate to a similar task and state a math link.
- Solve more than one way to verify the answer.
- Double the amount of bikes equals the number of tires.
- There are 4 more tires than bikes.
- There are 4 less bikes than tires.