

Family Support Materials

Adding, Subtracting, and Working with Data

In this unit, students build on what they learned about addition and subtraction in grade 1 to develop fluency with addition and subtraction facts within 20. They learn how to represent and interpret data on picture graphs and bar graphs, and they use these graphs to solve story problems involving addition and subtraction within 100. Students also learn a new representation, tape diagrams, to apply their understanding of the relationship between addition and subtraction and to solve problems.

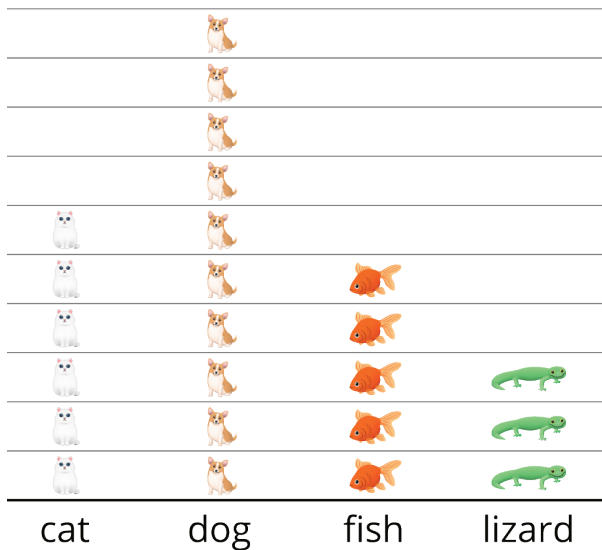
Section A: Add and Subtract Within 20

In this section, students use what they know about the relationship between addition and subtraction to find the missing values in equations. They use strategies learned in grade 1 such as making a ten, counting on, and counting back to add within 50 and subtract within 20. For example, when adding $8 + 7$, students break apart the 7 into $2 + 5$, and make a ten by adding $8 + 2$ and then add 5, so $8 + 2 + 5 = 15$. Students later use these strategies to add and subtract within 100.

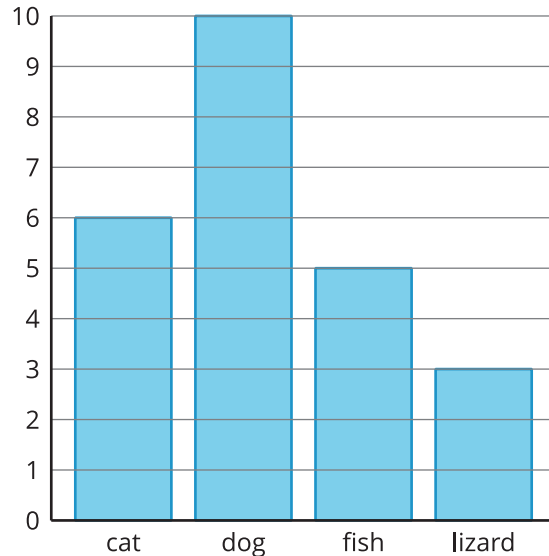
Section B: Ways to Represent Data

In this section, students are asked to make sense of two new data representations: a picture graph and a bar graph. Students learn to represent and interpret data on these graphs, and they ask and answer questions based on the data.

Favorite Pets



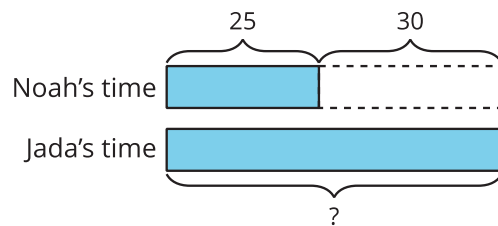
Favorite Pets



Section C: Diagrams to Compare

In this section, students solve story problems involving addition and subtraction within 100. The tape diagram is introduced in this section to support students with making sense of story problems and understanding the relationship between addition and subtraction. Before using a tape diagram, students have an opportunity to make sense of its structure and connect it to story problems. As an example the following problem can be represented on this type of diagram.

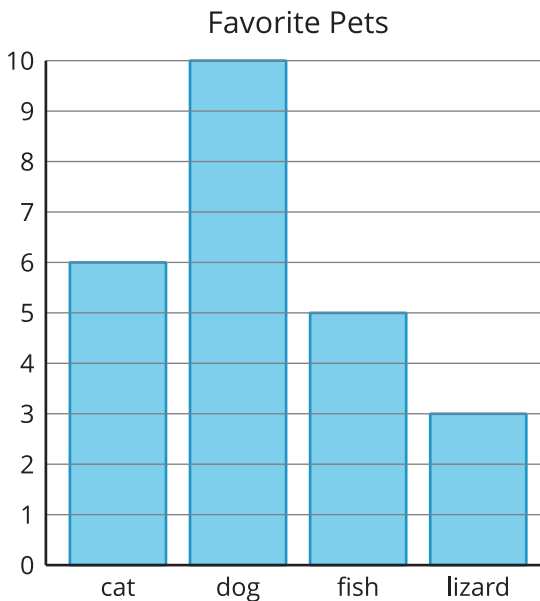
*Noah spent 25 minutes swimming.
Jada spent 30 more minutes swimming
than Noah. How many minutes did
Jada spend swimming?*



Try it at home!

Near the end of the unit:

1. Ask your student to write as many statements as they can about the bar graph.



2. Ask your student to represent and solve the following problem:

Andre read 45 pages of his book last night. Priya read 20 fewer pages of her book than Andre. Who read more pages? How many more pages? Explain or show your reasoning.

Questions that may be helpful as they work:

- How does the graph support that statement?
- How does the graph show that piece of information?
- Can you explain to me how you solved the problem?
- What pieces of information were helpful?