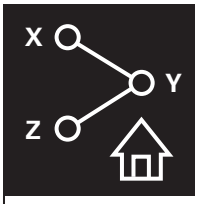


Use or Make a Picture or Diagram

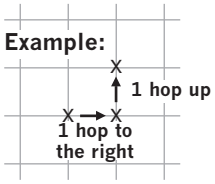
21

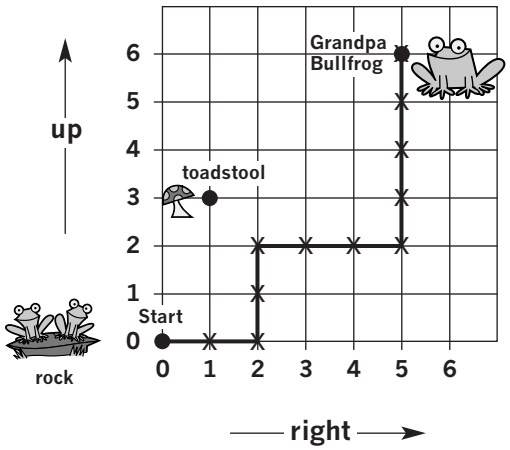
Two frogs are going to see Grandpa Bullfrog. The first frog starts at the rock and takes this path:

- **2 hops to the right**
- **2 hops up**
- **3 hops to the right**
- **4 hops up**

The second frog takes a different path. She also starts at the rock. She takes the same total number of hops as the first frog. What path could the second frog have taken?

Hint: You may find more than one path.





FIND OUT

- **What is the problem about?** Encourage students to restate the problem in their own words.
- **What do you have to find out to solve the problem?** *What path the second frog could have taken to Grandpa Bullfrog*
- **Find out what the problem tells you.**

  What path did the first frog take to Grandpa Bullfrog? *2 hops to the right, 2 hops up, 3 hops to the right, 4 hops up*

  What do you know about the path the second frog took? *She took the same number of hops as the first frog, but she took a different path.*

TEACHING TIP

Talk about the example with the students. Show them the arrows that direct them **to the right** and **up** along the squares of the map. Point out the length of one hop in each direction. Then have students trace the following path on the map with a finger.

Begin at *Start*, next to the rock. Go 1 hop to the right, then 3 hops up. Ask students what they find at the end of their path. *(a toadstool)*

Problem 21 : Geometry, Measurement

CHOOSE STRATEGIES

You can *Use or Make a Picture or Diagram*. A map is a kind of diagram. Using the map will help you find the paths the two frogs took.

SOLVE IT

1. **Use the map. Where does the first frog start?** *At the rock*
2. **Mark the path of the first frog on the map. Draw an X to show each hop. Then count the hops.**
3. **How many hops did the first frog take in all?** *11 hops*
4. **How many hops did the second frog take?** *11 hops*
5. **What path could the second frog have taken? Mark it on the map.**

   Solutions include: *5 hops to the right and 6 hops up; or 4 hops to the right, 6 hops up, and 1 hop to the right; or 3 hops to the right, 4 hops up, 1 hop to the right, 2 hops up, and 1 hop to the right* (Students may find other paths as well.)

LOOK BACK

Students should read or listen to the problem again and check their work. Encourage them to ask themselves, **Did I answer the question that was asked in the problem? Is my answer right?**

EXTENSION PROBLEM

A third frog took the same number of hops to Grandpa Bullfrog. He took a different path than the first two frogs. What path could the third frog have taken?

Solution: *1 hop to the right, 6 hops up, and 4 hops to the right (Any path that has a total of 5 hops to the right and a total of 6 hops up will be correct, as long as it is different from the paths the first two frogs took.)*

TALK ABOUT IT

Have students talk with a partner or small group about how they solved the Extension Problem. Encourage students to share their different ways of thinking. Ask a question such as, **How did you use the map to help you solve the problem?**

WRITE YOUR OWN PROBLEM

Have students write similar problems of their own. Students can then exchange problems and solve them.

PRACTICE

Similar Practice Problems: 69, 70, 71

When you give students a Practice Problem, ask questions such as, **Have you solved a problem like this before? What strategies helped you solve it?**