

What Is a Computer Bug?

Learn why programs go wrong, and how programmers fix them.

Name _____

Date _____

Program: Get ready for school

Step 1: Put on your socks

Step 2: Tie your shoelaces

Step 3: Put on your shoes

BUG! Wrong order

1 Find the Bug

Each program has one bug. Circle the step that is wrong.

Make a sandwich

1. Get two slices of bread
2. Put the slices together
3. Spread jam on one slice
4. Eat

Draw a square

1. Draw a line
2. Turn right
3. Repeat steps 1 and 2 until you have drawn 3 lines

Get dressed for rain

1. Look out the window
2. If it is raining, leave your umbrella at home
3. Go outside

2 Debug It

Pick one program from activity 1. Write the steps again so that it works.

3 True or False?

Circle TRUE or FALSE.

- | | | |
|---|----------------------------|-----------------------------|
| 1. A computer bug is a real insect living inside every computer. | ☐ TRUE | ☐ FALSE |
| 2. A computer does what the steps say, even when the steps are wrong. | ☐ TRUE | ☐ FALSE |
| 3. Debugging means finding and fixing mistakes in a program. | ☐ TRUE | ☐ FALSE |
| 4. Only bad programmers make bugs. | ☐ TRUE | ☐ FALSE |
| 5. An update can fix bugs in an app or game. | ☐ TRUE | ☐ FALSE |

4 Write Your Own Program

Write exact steps for brushing your teeth. Then give them to someone and ask them to follow **only** what you wrote. Did you find a bug?

5 In Your Own Words

Why can one small mistake in a program cause strange behavior?

Did you know? In 1947, engineers working on an early computer found a real moth stuck inside it and taped it into their logbook. The word “bug” was already used for technical problems before that.

Answers for grown-ups. 1: Sandwich: steps 2 and 3 are in the wrong order. Square: it should be 4 lines. Rain: you should take the umbrella. 3: 1 False, 2 True, 3 True, 4 False (every programmer makes them), 5 True. 5: A computer follows its steps exactly, so a wrong step gives a wrong result.

KEEP LEARNING

Goes with the book **How Computers Work for Kids Ages 8–12** by Laith Sad.

Book on Amazon: amazon.com/dp/BOHLYSJ1QX

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