

Find the bug. Fix it.

Cross out the broken step. Draw the fix in the empty boxes.

CODE



1



2



3

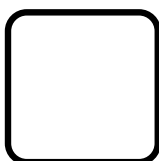


4

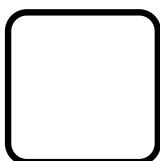
ARROWS

- ▲ up
- ▶ right
- ◀ left
- ▼ down

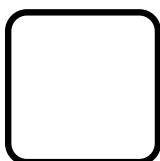
FIX



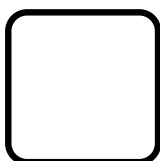
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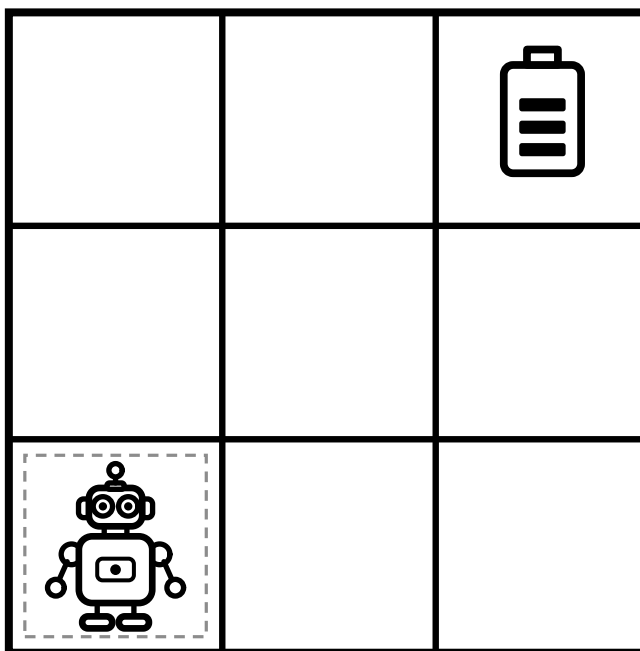
3



4

GRID

Draw a line through the squares the robot visits.



☐ I found the bug and wrote the fix.

FOR GROWN-UPS

Step four says left. The robot ends one square left of the battery. One wrong arrow, one square off.

Have them run the broken code with a finger before they look for the bug.

Off the page: give a four-step route with one wrong turn in it.

Find the bug. Fix it.

The robot stops one square early. Draw the missing step.

CODE



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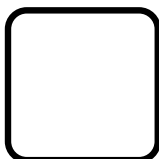


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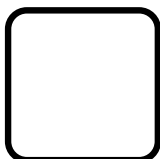
ARROWS

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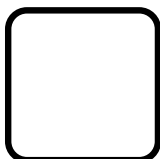
FIX



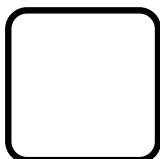
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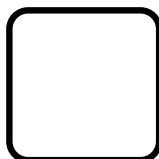
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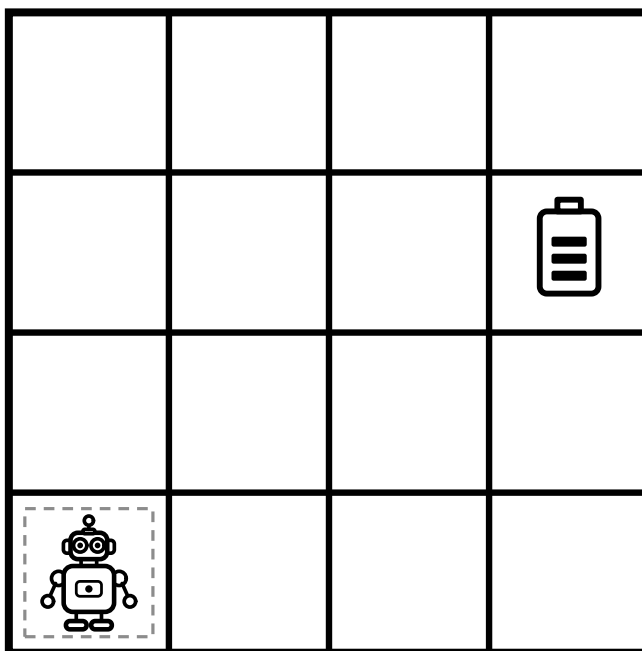
4



5

GRID

Draw a line through the squares the robot visits.



☐ I added the missing step.

FOR GROWN-UPS

Nothing here is wrong. Something is missing. The code stops one square under the battery.

Ask: "Where does the robot end? Where should it end? What one step joins them?"

Off the page: give directions that stop one step short and let them notice.

Find the bug. Fix it.

There is an extra step. Cross it out. Draw the fix.

CODE



1



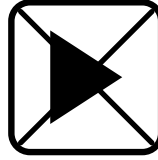
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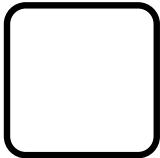


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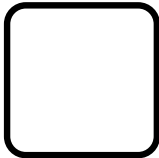
ARROWS

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- ▶ right
- ◀ left
- ▼ down

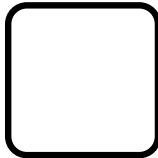
FIX



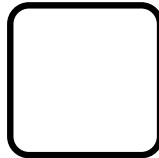
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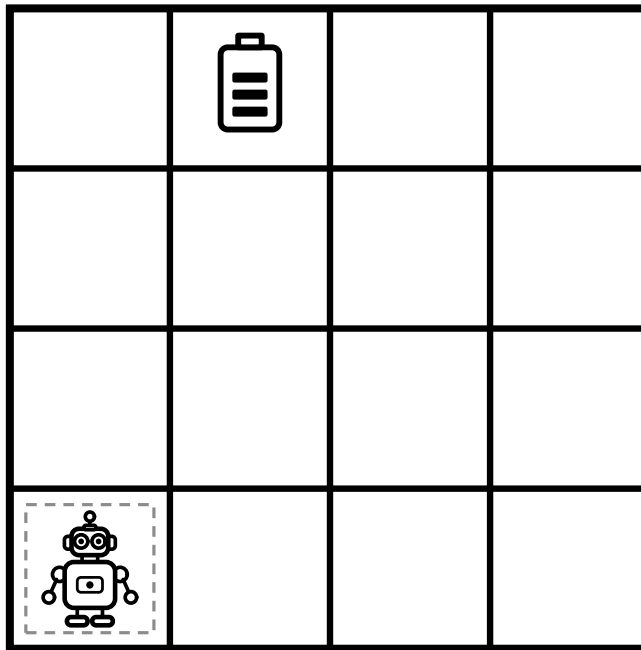
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4

GRID

Draw a line through the squares the robot visits.



☐ I took out the extra step.

FOR GROWN-UPS

One step too many. The code reaches the battery on step four and then walks past it.

Ask: "After which step is the robot on the battery?" Everything after that is the bug.

Off the page: say a route with one step too many.

Find the bug. Fix it.

Two steps are swapped. Cross them out. Draw the fix.

CODE



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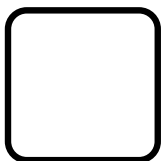


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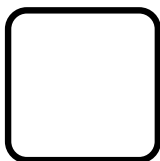
ARROWS

- ▲ up
- right
- ◄ left
- ▼ down

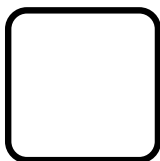
FIX



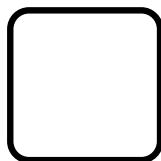
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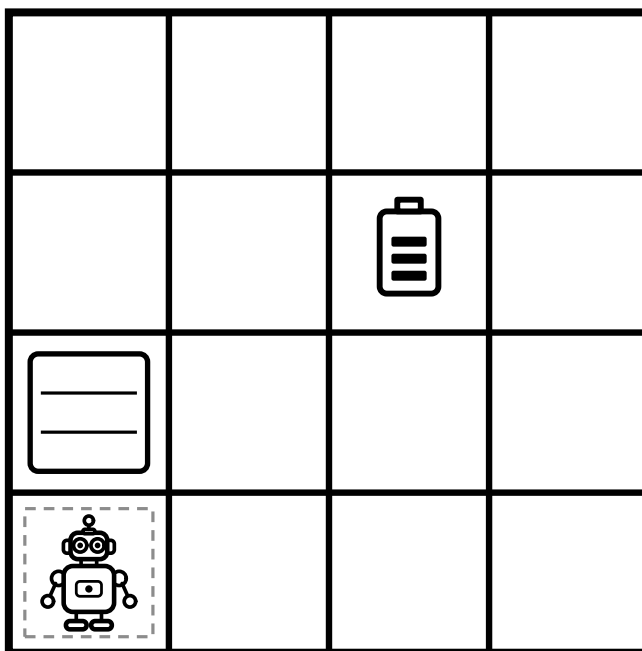
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4

GRID

Draw a line through the squares the robot visits.



☐ I fixed the swapped steps.

FOR GROWN-UPS

The first two steps are the right arrows in the wrong order. Up first walks into the wall.

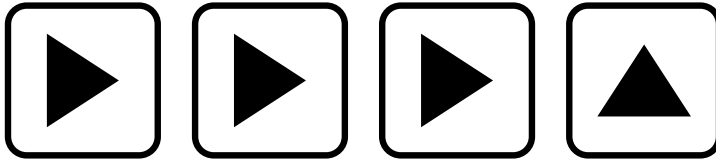
Ask: "What is in the square above the robot?" The wall is the clue.

Off the page: say "shoes, then socks" and let them fix it.

Fix the start.

The code is fine. The robot is not where the code begins. Draw the robot on the start square.

CODE



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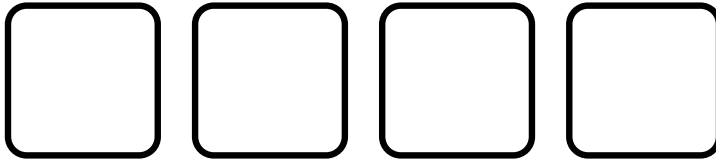
3

4

ARROWS

- ▲ up
- ▶ right
- ◀ left
- ▼ down

FIX



1

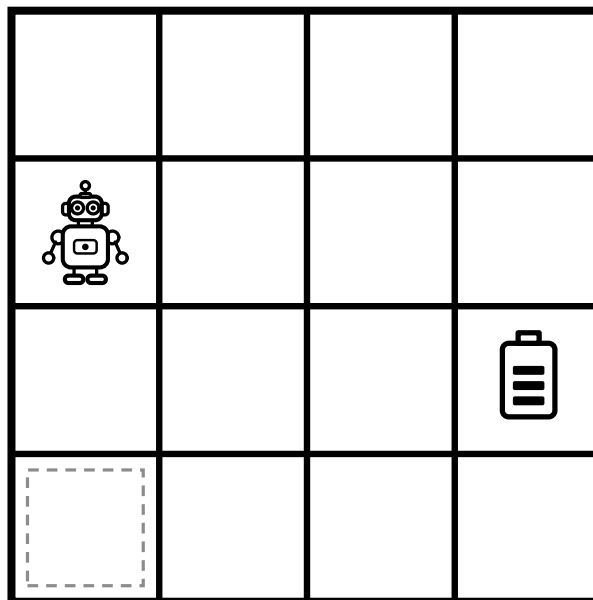
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4

GRID

Draw a line through the squares the robot visits.



☐ I put the robot on the start.

FOR GROWN-UPS

The bug is not in the code. Run it from where the robot stands and it misses; run it from the start square and it lands.

Ask: "Try the code from where the robot is. Now try it from the bottom corner."

Find the bug. Fix it.

There are two bugs on this page. Find both. Draw the fix.

CODE



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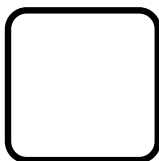


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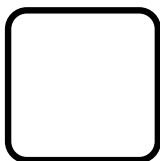
ARROWS

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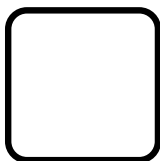
FIX



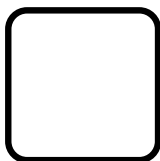
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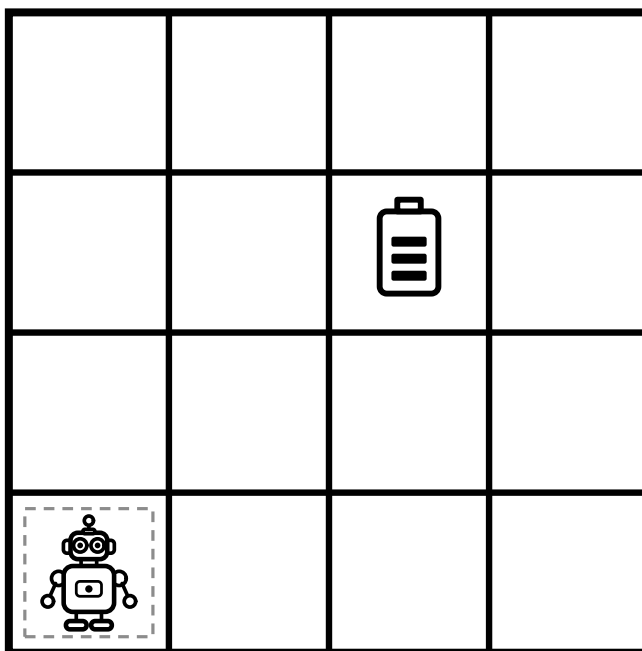
3



4

GRID

Draw a line through the squares the robot visits.



☐ I found both bugs.

FOR GROWN-UPS

Two bugs. Step two goes the wrong way, and there is one step too many at the end. Fixing one is not enough.

Ask: "Is it fixed?" after the first fix, and let them run it again to find out.