Read the code. Draw the path.

Start at the robot. Follow each arrow one square. Stop at the battery.

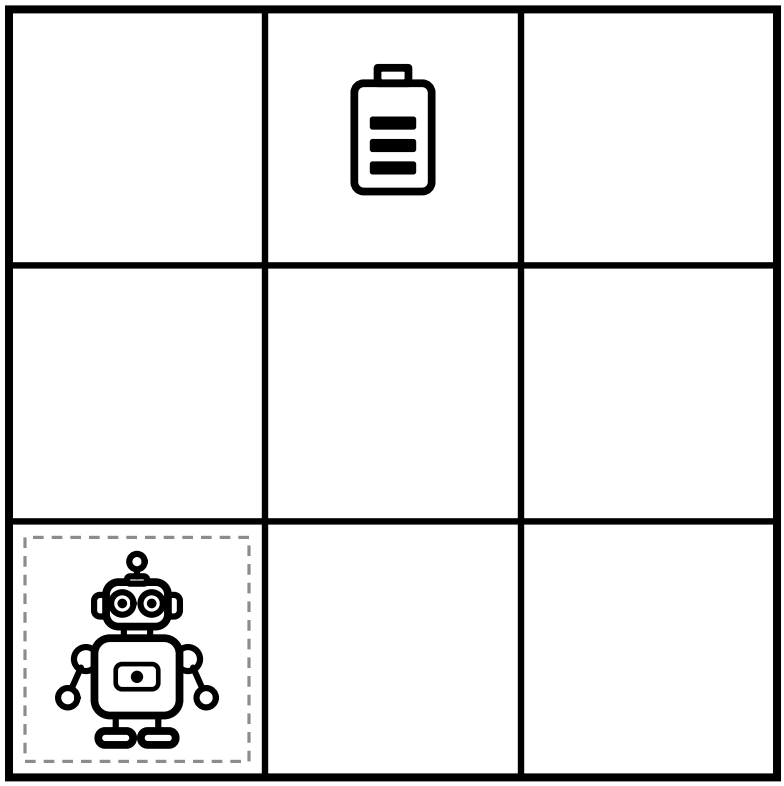
CODE

1 2 3

ARROWS
- ▲ up
- ▶ right
- ◀ left
- ▼ down

Before you draw, circle one: ◯ lands on the battery ◯ lands somewhere else

GRID Draw a line through the squares the robot visits.



◯ I landed on the battery.

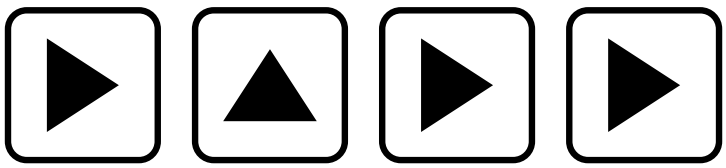
FOR GROWN-UPS

Right, up, up. One square per arrow, and the robot does not turn: up is always the square above.
Ask: "Where is the robot after the first arrow?" Point at the code, not the grid.
Off the page: tape a 3 by 3 grid on the floor and read this code to them one arrow at a time.

Read the code. Draw the path.

Start at the robot. Follow each arrow one square. Stop at the battery.

CODE

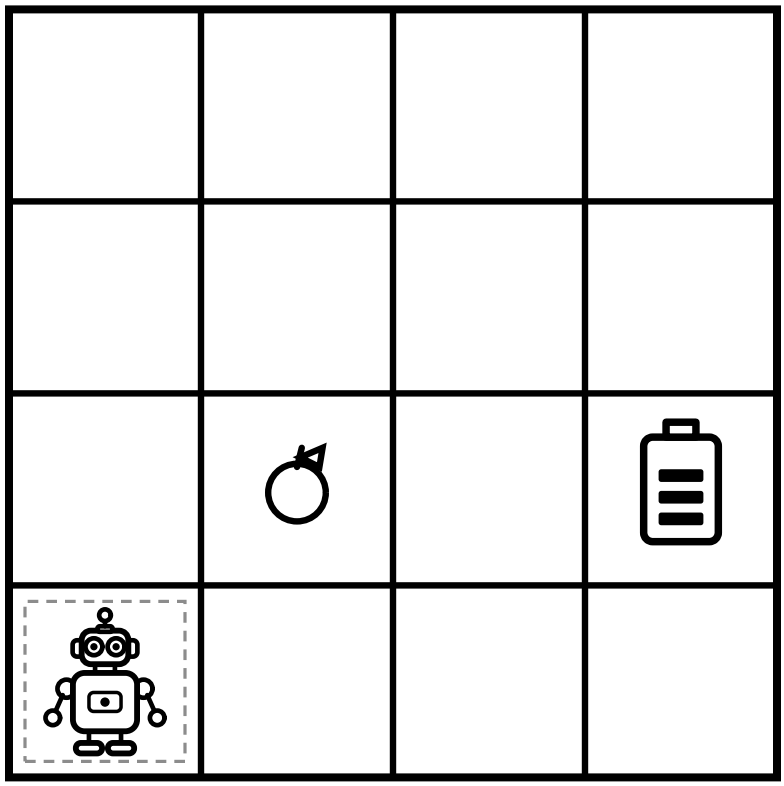


1 2 3 4

ARROWS
- ▲ up
- ▶ right
- ◀ left
- ▼ down

Before you draw, circle one: ◯ lands on the battery ◯ lands somewhere else

GRID Draw a line through the squares the robot visits.



◯ I landed on the battery.

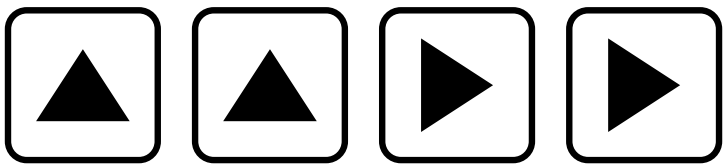
FOR GROWN-UPS

There is an apple on the way. The robot picks it up by walking through its square, and this code does.
Ask: "Which arrow takes the robot onto the apple?"
Off the page: put a toy on the floor grid and write a code that walks over it.

Read the code. Draw the path.

Start at the robot. Follow each arrow one square. Stop at the battery.

CODE

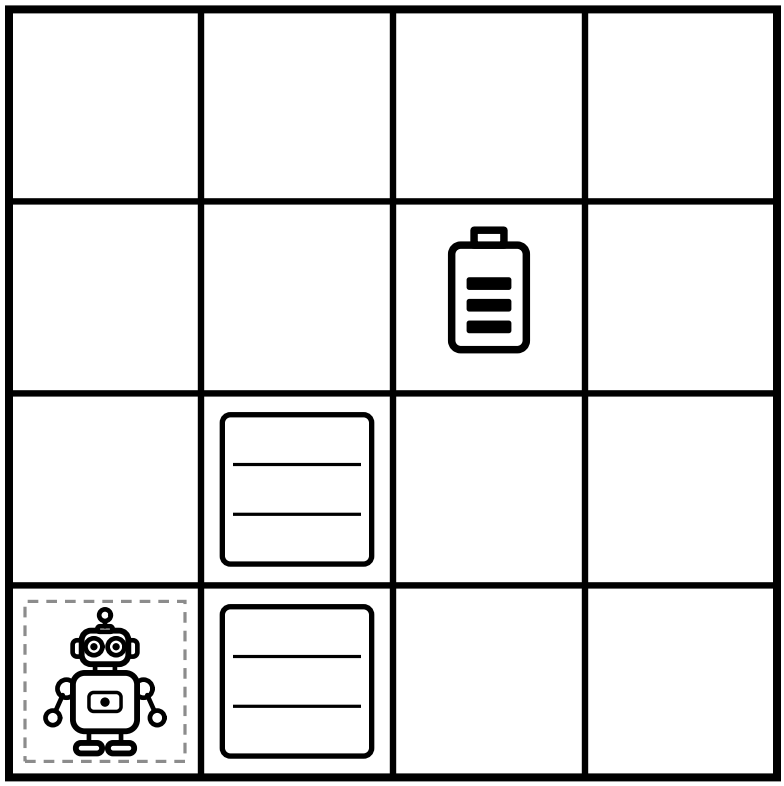


1 2 3 4

ARROWS
- ▲ up
- ▶ right
- ◀ left
- ▼ down

Before you draw, circle one: ◯ lands on the battery ◯ lands somewhere else

GRID Draw a line through the squares the robot visits.



◯ I landed on the battery.

FOR GROWN-UPS

Two walls. The code goes up first and round them. Right first would hit a wall on step one.
Ask: "What would happen if the first arrow were right?"
Off the page: put a chair on the floor grid and code round it.

Circle the shortest code.

All three land on the battery. Circle the one with the fewest steps.

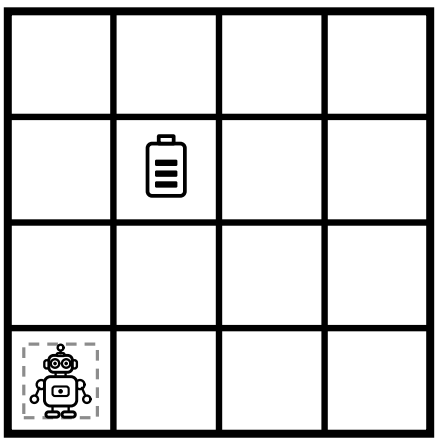
A ○

B ○

C ○

ARROWS
- up
- right
- left
- down

GRID Draw a line through the squares the robot visits.



○ I circled the shortest code.

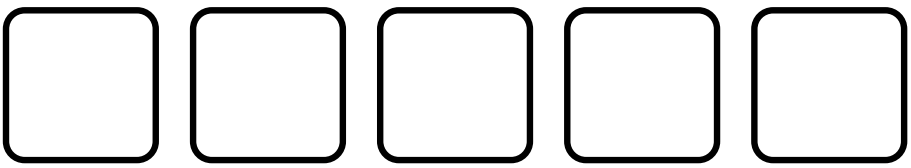
FOR GROWN-UPS

All three codes land. B does it in three steps; A and C take a step and undo it.
Ask: "Find the step that gets undone." Every extra step has a partner.
Off the page: walk to the door the long way, then ask for the short way.

Write the code.

Look at the path. Draw one arrow in each box.

CODE

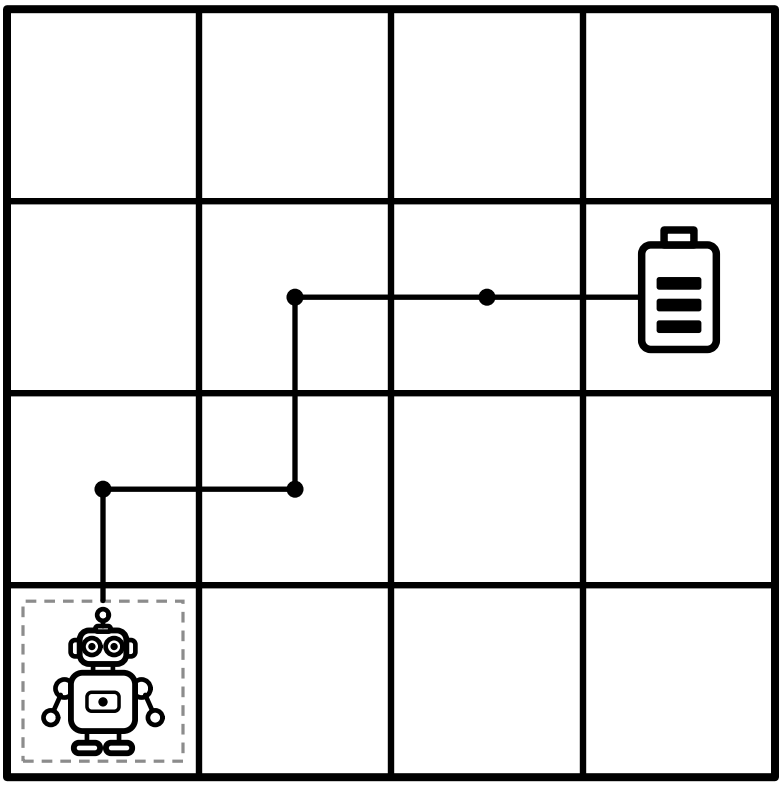


1 2 3 4 5

ARROWS

- ▲ up
- ▶ right
- ◀ left
- ▼ down

GRID The path is drawn. Write the arrows.



○ I wrote the code.

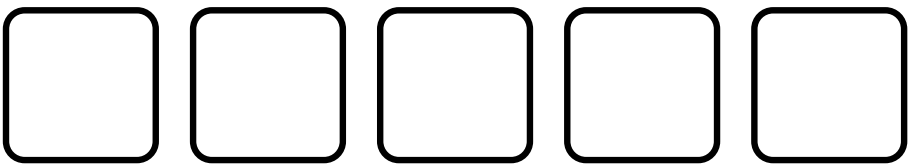
FOR GROWN-UPS

The path is drawn. One arrow per step, in order, and five boxes means five steps.
Ask: "Which way does the path go first?" Then wait.
Off the page: walk a route and have them draw the arrows for it afterward.

Write the shortest code.

The path is drawn. Write the code with the fewest arrows that follows it.

CODE

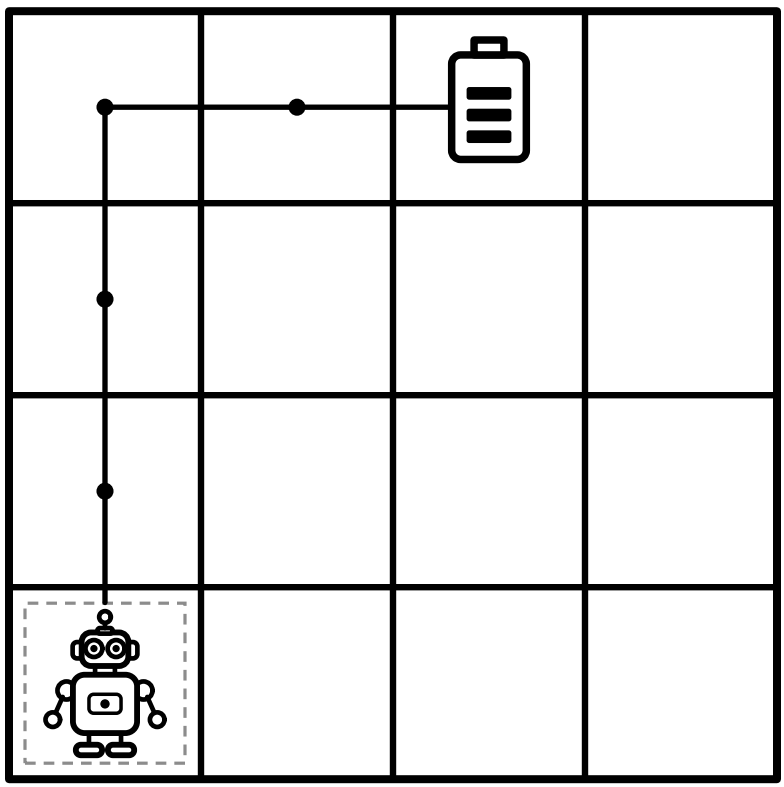


1 2 3 4 5

ARROWS

- up
- right
- left
- down

GRID The path is drawn. Write the arrows.



I wrote the shortest code.

FOR GROWN-UPS

Three ups, then two rights. Any order of those five arrows is just as short.
Ask: "How many squares up? How many across?" The counts are the code.
Off the page: count the steps from the table to the door and write them as arrows.