Loops: Repeat the Steps: Worksheet

Coding for Kids · Worksheet for https://jugami.com/kid-coding/loops/ · For instant feedback, try the self-guided quiz online.

Name: _____ **Date:** _____

Directions

Use a **Repeat block** to pack steps that happen again and again. A Repeat block has a number (how many times) and steps inside (what gets repeated). You may write a Repeat block like this: `Repeat 3 times: Nod`.

The turtle in later problems starts in the **bottom left** square of a 5-by-5 grid, **facing up**. Rows count from the **top**, so the start is **row 5, column 1**. A turn happens in place and does not use up a square. If a step would leave the grid, the turtle bumps and stops.

Show your work in the space under each problem.

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1. Look at this list of steps:

1. Snap
2. Snap
3. Snap
4. Snap
5. Bow

Circle the steps that are the same, one after another. Which step happens only once?

_____

2. Write a Repeat block that does the same job as: Nod, Nod, Nod.

_____

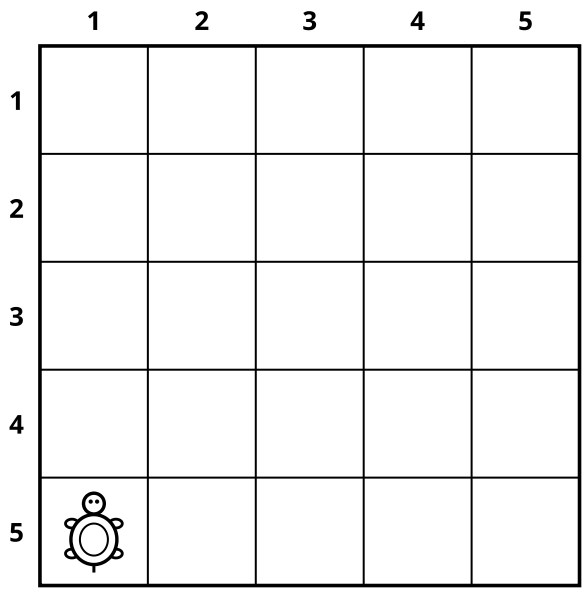
3. The long steps are: Slide left, Slide right, Slide left, Slide right, Slide left, Slide right.

Fill in the blank: Repeat _____ times: Slide left, Slide right.

4. A program says: Repeat 6 times: Take a bow. How many bows is that?

_____

5.



A 5-by-5 grid. The turtle starts in row 5, column 1, facing up.

The program is: Repeat 2 times: Step forward.

In which row and column does the turtle stop? Which way does it face?

Row _____ Column _____ Facing _____

6. Use the same 5-by-5 grid and the same start (row 5, column 1, facing up). The left edge of the grid is a wall.

The program is: Turn left, Repeat 2 times: Step forward.

What happens? Write a short sentence.

_____

_____

7. Rewrite this program with a Repeat block: Turn right, Step forward, Step forward, Step forward, Step forward.

_____

8. Bug hunt. Use the same 5-by-5 grid and the same start (row 5, column 1, facing up). The star is two squares up from the start, at row 3, column 1.

The program is: Repeat 4 times: Step forward.

The turtle will go past the star. What number should go in the Repeat block so the turtle stops on the star?

Repeat _____ times: Step forward.

9. A square walk with sides that are one step long. The turtle starts facing up. Fill in the blank:

Repeat _____ times: Step forward, Turn right.

After the program finishes, is the turtle back where it started? Circle one: Yes No

10. Two programs:

- Program A: Repeat 3 times: Step forward, Step forward.
- Program B: Repeat 6 times: Step forward.

If the turtle never turns and never bumps, do the two programs move it the same number of squares forward? Circle one: Yes No

How many squares forward is that? _____

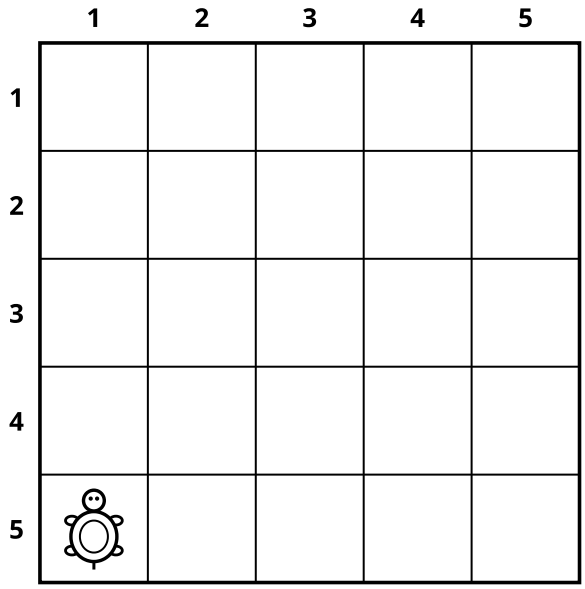
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11. Stretch. This program has a Repeat block inside another Repeat block:

Repeat 2 times: (Repeat 3 times: Clap), then Stomp.

How many claps? _____ How many stomps? _____

12. Stretch path.



A 5-by-5 grid. The turtle starts in row 5, column 1, facing up.

The program is: Repeat 2 times: (Repeat 3 times: Step forward), then Turn right.

Draw the path on the grid. Where does the turtle stop, and which way does it face?

Row _____ Column _____ Facing _____