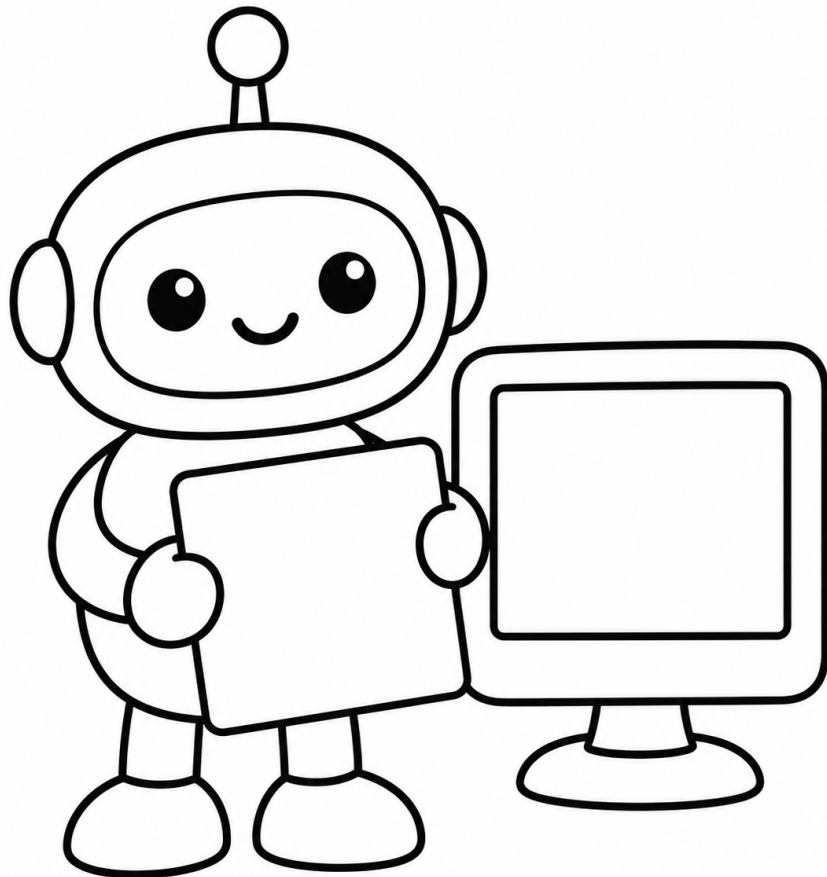


# Hello, picture helpers!

Color the scene. Point to the robot and the screen.



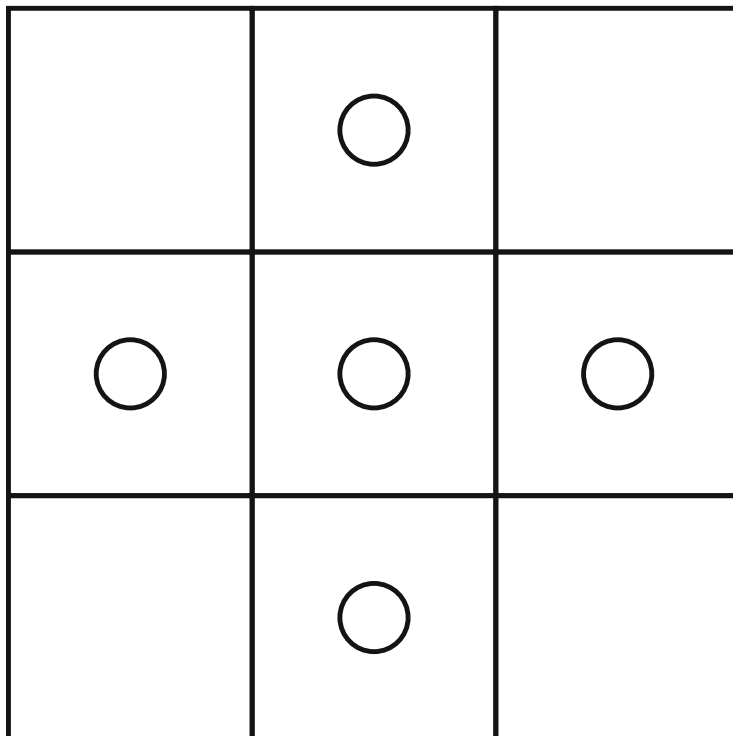
What picture would you ask the helpers to make?

---

Our friendly helpers are pretend. A GPU is a computer part that can work on many similar jobs.

# A picture made of squares

Color only the squares with little circles inside.



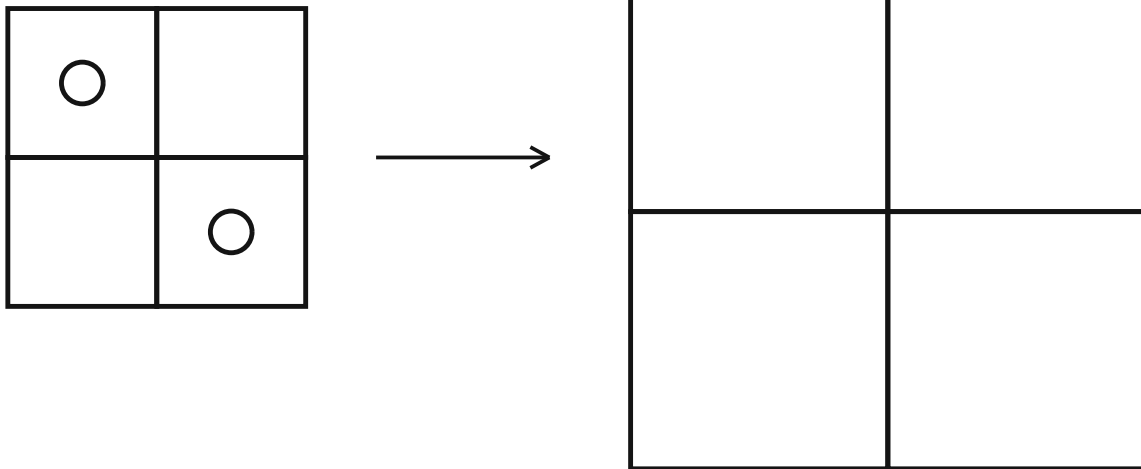
Point to one square. Each square is a picture piece.

---

A digital picture can be made from tiny picture elements called pixels. This model makes them large.

# Little picture, big picture

Copy the little picture into the big squares.



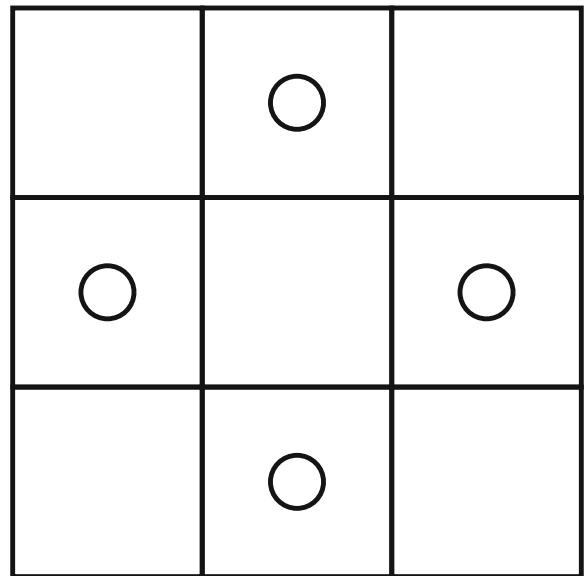
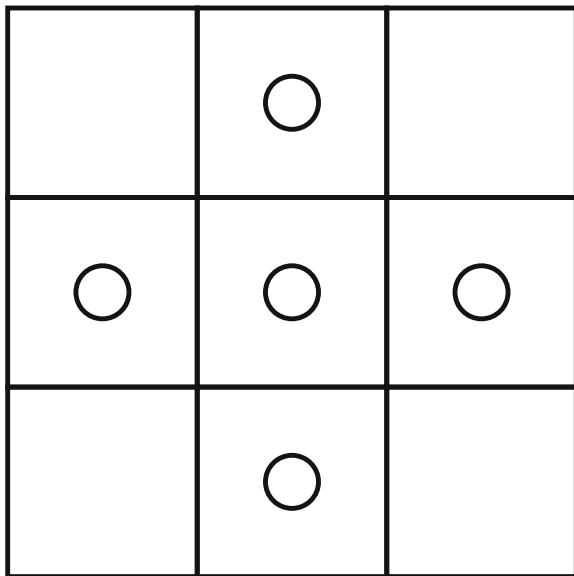
Which two big squares need color?

---

The top-left and bottom-right squares match. Enlarging this picture keeps the same arrangement.

# A missing picture square

Compare the pictures. Color the one missing square.



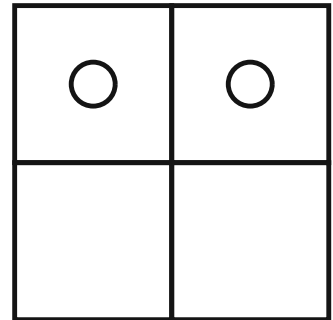
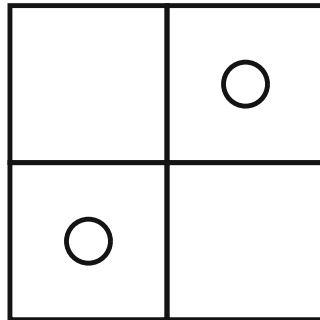
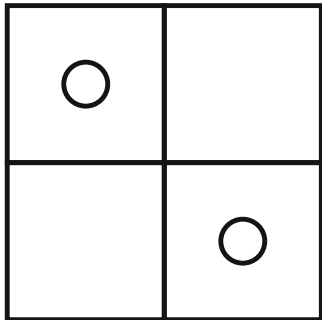
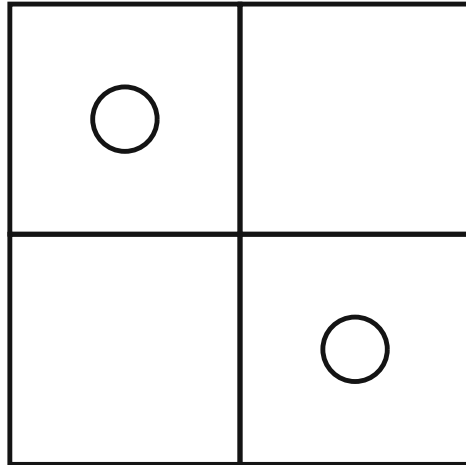
Use the left picture to help finish the right one.

---

Color or circle the center square on the right. The circles are coloring cues, not pixels themselves.

# Find the matching picture

Point to the little picture that matches the big one.

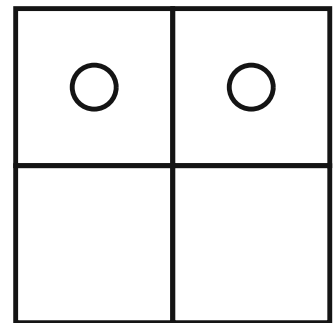
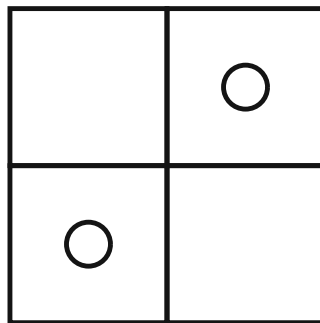
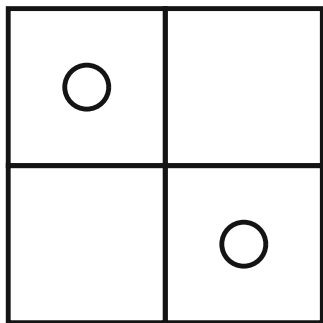
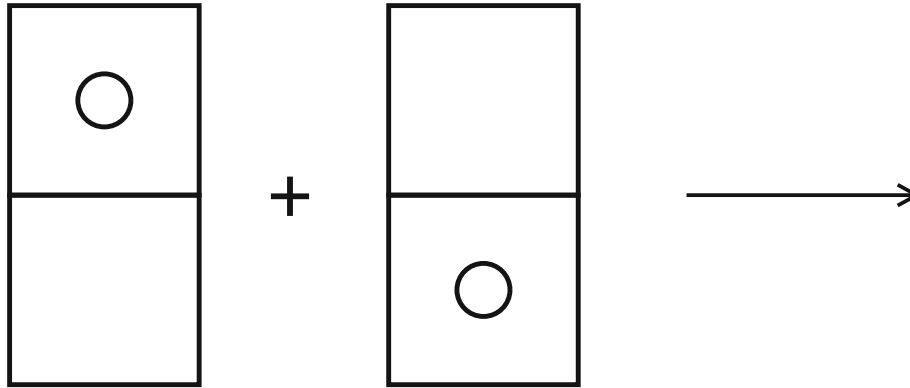


---

The matching arrangement is on the left, even though its squares are smaller.

# Two halves make a picture

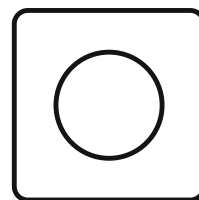
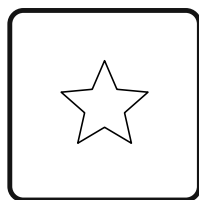
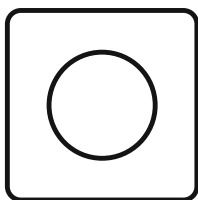
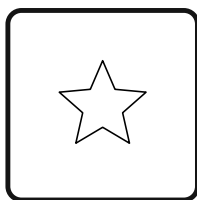
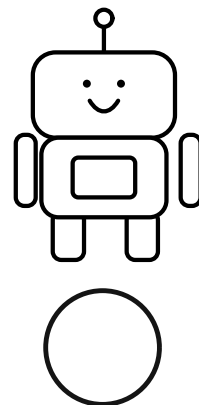
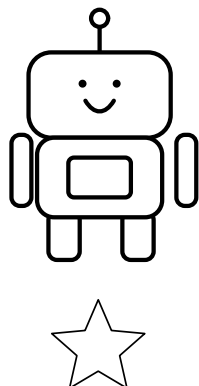
Look at the two strips. Point to their finished picture.



Keep the left strip on the left and the right strip on the right. The finished picture is the left choice.

# Give each helper a job

Join each shape job to the helper with the same badge.

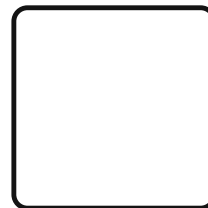
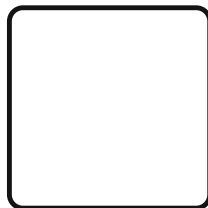
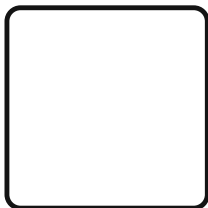
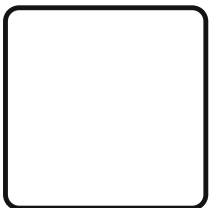
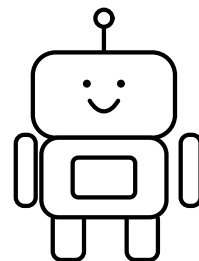
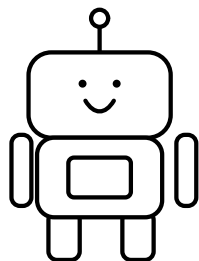


---

Both helpers get two jobs. This is a matching game, not a diagram of GPU hardware.

# Share four picture jobs

Give each helper two square jobs. Draw lines to share.



Touch each job once as you give it away.

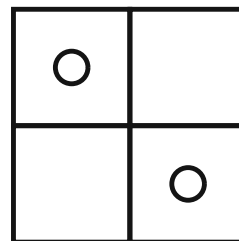
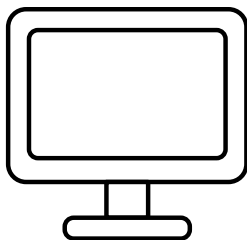
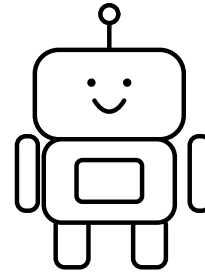
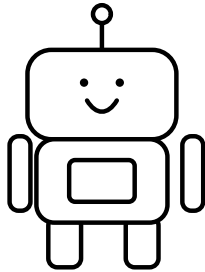
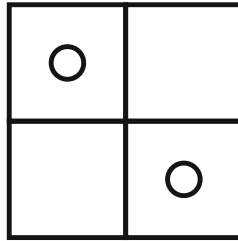
---

Many fair assignments work: two jobs per helper, each job used once. No timing or speed claim is made.

# First, next, finished

Point to the idea, then the helpers, then the finished picture.

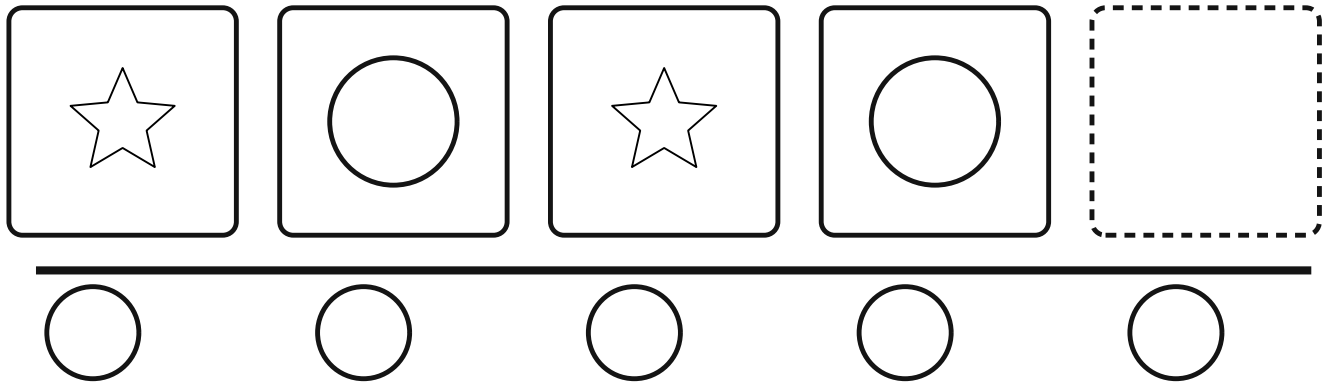
picture idea



Top -> middle -> bottom. Our paper story is a simplified sequence, not the timing inside a real computer.

# A tile train pattern

Point and say: star, circle, star, circle. Draw what comes next.



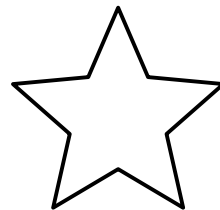
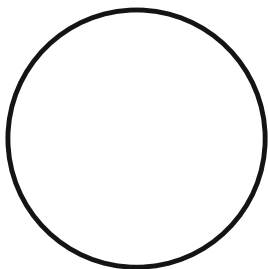
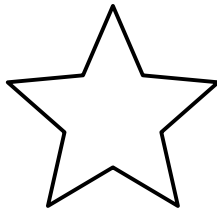
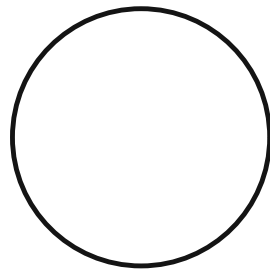
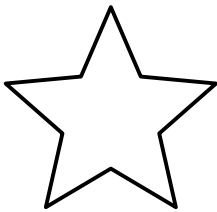
Invent a sound for each shape. Say the pattern again.

---

A star comes next. This is a repeating picture pattern, not a real data format.

# One rule for all the stars

Color every star. Leave the circles empty.

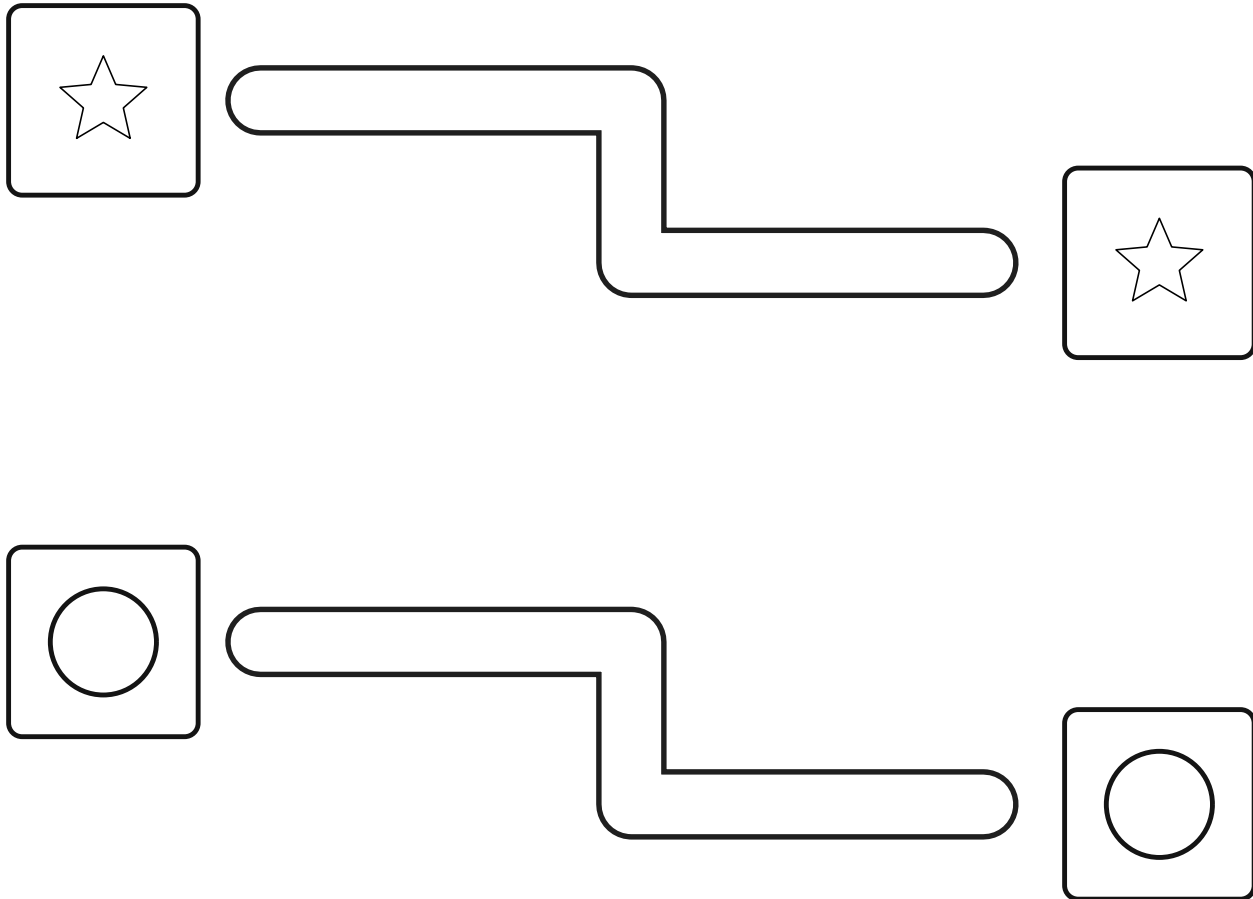


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There are three stars to color. A repeated rule can apply to many picture parts.

# Follow the picture jobs

Trace each wide path from a job to its picture.

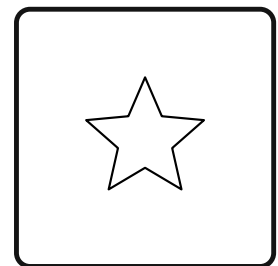
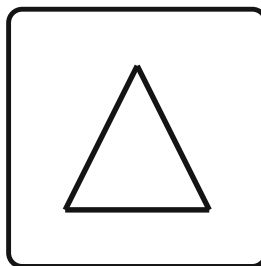
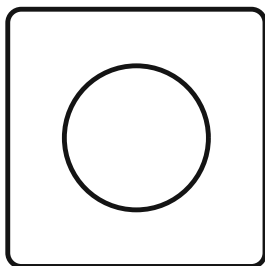
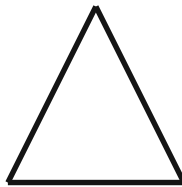
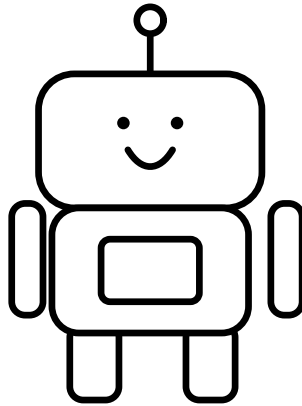


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Trace one route at a time. The paths stand for sending work; they are not physical chip wires.

# Which tile is needed?

The helper needs a triangle. Point to the tile to send.

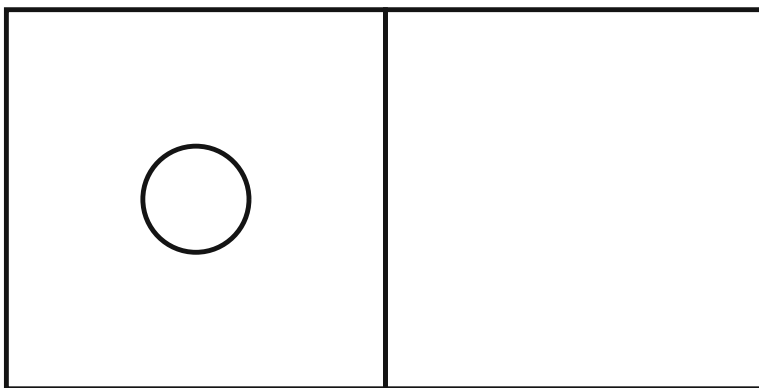


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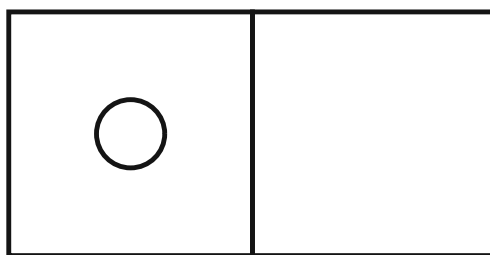
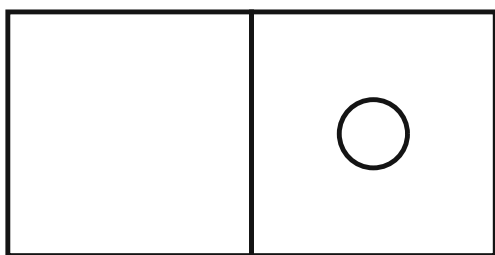
Middle: the triangle. A computer task needs the right information; the character is pretend.

# Swap the picture colors

Point to the picture with the colors swapped.



Color the marked square. Now swap colored and empty.

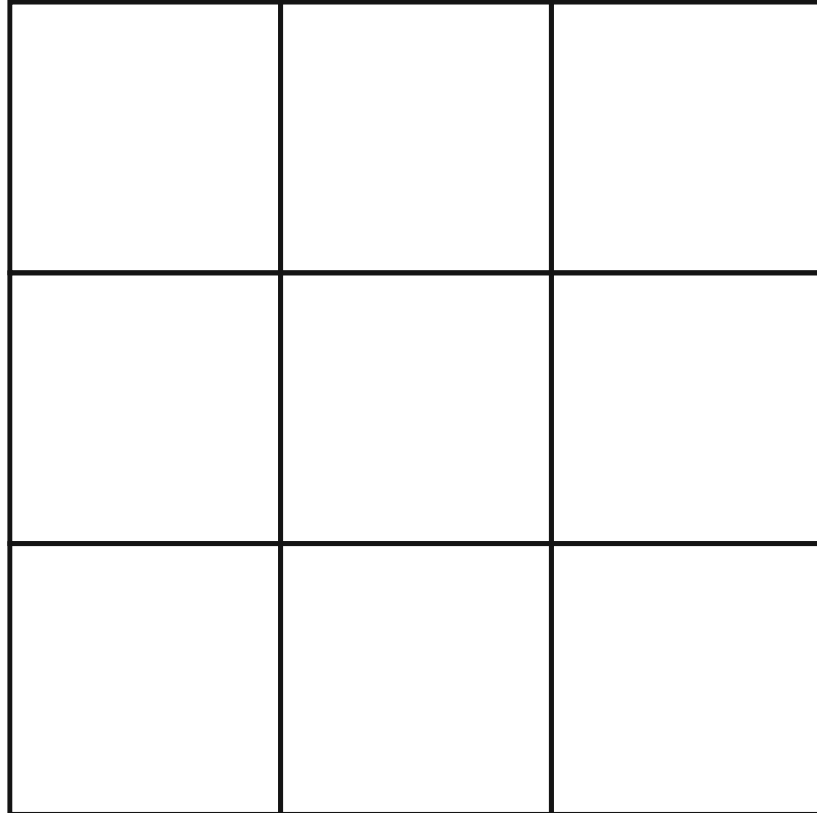


---

Left choice: empty then colored. This is a two-square rule game, not a claim that all graphics work this way.

# Make a tiny pixel picture

Choose up to five squares to color. Tell what you made.



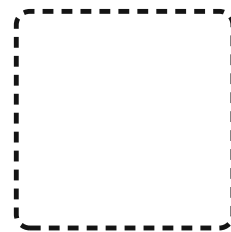
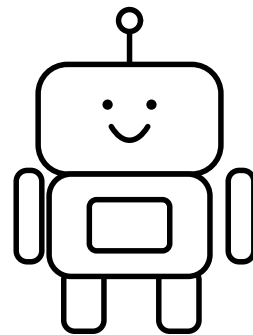
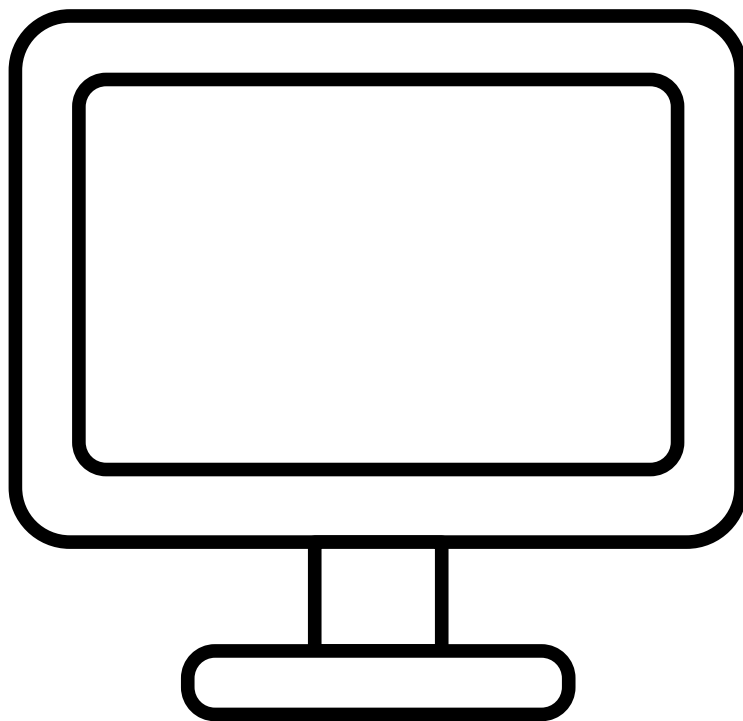
It can be a real thing, a shape, or a pretend thing.

---

Help count only the squares your child chooses. There is no required picture.

# The picture helper gallery

Add a picture to the screen. Give your helper a badge.



Tell a grownup one job your helper could do.

---

Open drawing and conversation. Real GPUs are electronic parts, not little people or robots.

# A little guide for grownups

Ages 4-6 | Read aloud, point, trace, and talk.

## Get ready

Print actual size on Letter or A4. Use crayons or a pencil. No scissors, glue, screens, or independent reading are needed.

## Make it gentle

Try one or two pages at a time. A child may answer by pointing or speaking. Offer a finger trace before a pencil trace.

## What this explores

Picture squares, matching arrangements, combining parts, repeating a rule, and sharing simple jobs. These are early observation activities, not lessons in binary numbers or chip design.

## Keep the model honest

GPUs can handle many similar tasks. CPUs can also work in parallel. Robots, trains, and routes are metaphors; four paper jobs do not predict speed or perfect scaling. Circles mark squares to color.

## Sources for grownups

Intel: CPU vs. GPU

<https://www.intel.com/content/www/us/en/products/docs/processors/cpu-vs-gpu.html>

# Answers and conversations

Pointing, speaking, or drawing all count.

- |                                                             |                                                            |
|-------------------------------------------------------------|------------------------------------------------------------|
| 1. Open coloring and picture observation.                   | 9. Idea top; helpers middle; finished picture bottom.      |
| 2. Color five marked squares to make a plus shape.          | 10. A star comes next.                                     |
| 3. Color the large top-left and bottom-right squares.       | 11. Color the three stars; leave two circles empty.        |
| 4. Right picture: the center square is missing.             | 12. Both paths lead to the matching picture shape.         |
| 5. The left choice matches.                                 | 13. Send the middle tile: triangle.                        |
| 6. The left choice joins the strips in their shown order.   | 14. Left choice swaps colored and empty.                   |
| 7. Star jobs -> star badge; circle jobs -> circle badge.    | 15. Open: up to five colored squares. Help count together. |
| 8. Any assignment using all four jobs once, two per helper. | 16. Open drawing and explanation of a pretend picture job. |

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Open-ended pages have many useful answers. Ask what your child noticed; no scores are needed.