Year 4 maths: Lines of symmetry (Medium)

Maths · Shapes and space · Level: Medium

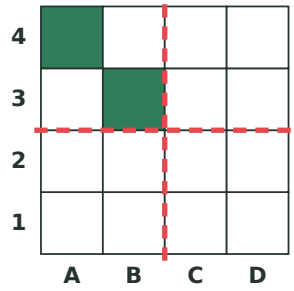
Student: _____ Date: _____

Instructions
- There are 10 questions. Read each one carefully.
- Write your answers on this paper. Use the space under a question to work it out.
- A grown-up can read a question aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

1. How many more squares must be shaded so that both dashed lines are lines of symmetry?

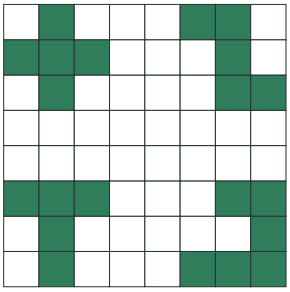
Answer: ☐ squares



Working:

2. Here are four tile designs. How many of them have NO line of symmetry?

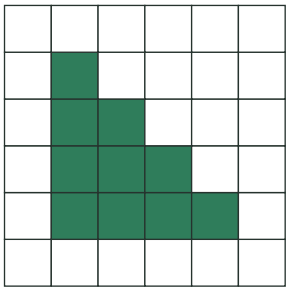
Answer: ☐ designs



Working:

3. Does this staircase design have a line of symmetry?

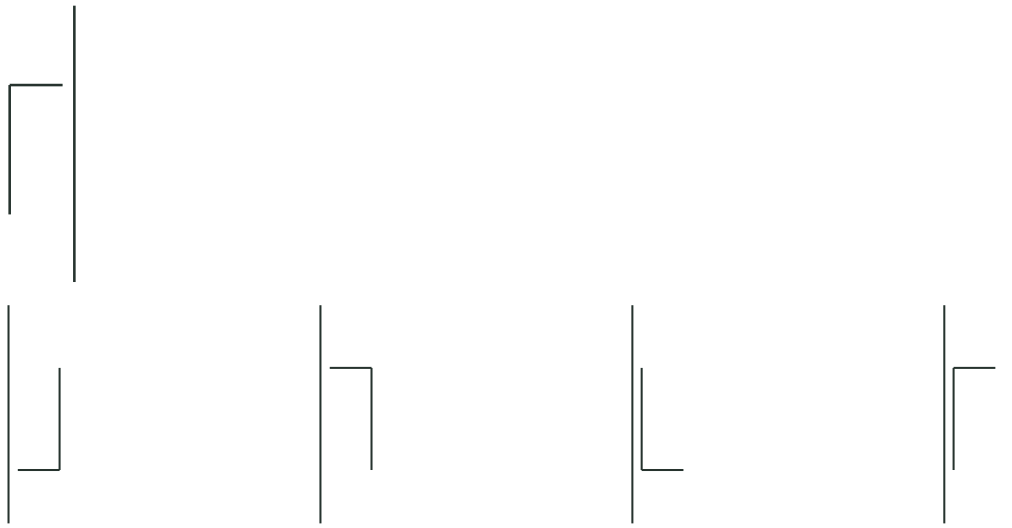
Circle one answer.



○ **A** Yes ○ **B** No

4. Which picture shows the reflection of this line in the mirror line?

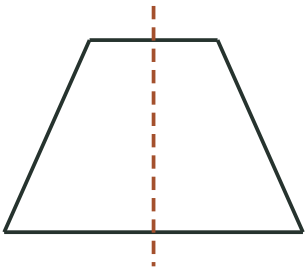
Circle one answer.



○ **A** ○ **B** ○ **C** ○ **D**

5. Priya folds a paper trapezium in half along its line of symmetry, so the two slanting sides meet. What shape does she get?

Circle one answer.



○ **A** a triangle

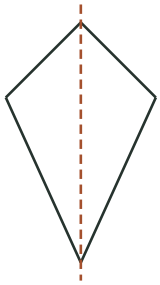
○ **B** a rectangle

○ **C** a four-sided shape with two square corners

○ **D** the same trapezium

6. Mei folds a kite-shaped piece of paper along its line of symmetry. What shape does she get?

Circle one answer.

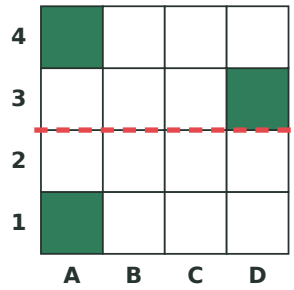


○ **A** a kite ○ **B** a square ○ **C** a triangle

○ **D** a rectangle

7. Which square must be shaded so the dashed line across the grid is a line of symmetry?

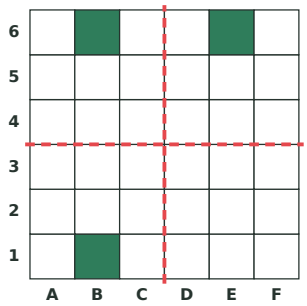
Circle one answer.



○ **A** A3 ○ **B** D1 ○ **C** D2 ○ **D** D4

8. Both dashed lines should be lines of symmetry. Which square still needs to be shaded?

Circle one answer.



○ **A** D1 ○ **B** E1 ○ **C** 1E ○ **D** F1

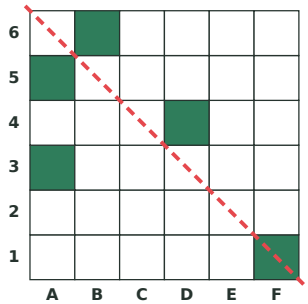
9. Hamish adds the number of lines of symmetry of an equilateral triangle to the number of lines of symmetry of a kite. What is the total?

Circle one answer.

○ **A** 5 ○ **B** 4 ○ **C** 6 ○ **D** 2

10. The dashed corner-to-corner line should be a line of symmetry. How many more squares must be shaded?

Circle one answer.



○ **A** 2 ○ **B** 3 ○ **C** 4 ○ **D** 1

Answer key

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1. 6 squares

A4 needs D4, A1 and D1. B3 needs C3, B2 and C2. That is 3 + 3 = 6 more squares.

2. 2 designs

The plus (top left) has four fold lines and the T (bottom left) folds up and down. The Z (top right) and the hook (bottom right) have no fold line. That is 2 designs.

3. A — Yes

Yes. It does not fold up and down or across, but it folds from corner to corner and the halves match.

4. B

The top part touches the mirror, so its reflection touches the mirror too. The long side drops down on the far side, at the same height as before.

5. C — a four-sided shape with two square corners

Each half has the fold as an upright side, with a square corner at the top and the bottom, plus one slanting side. So it is a four-sided shape with two square corners.

6. C — a triangle

The fold goes from the top point to the bottom point. One half lands on the other, and each half is a triangle.

7. C — D2

The line is between rows 2 and 3. D3 touches the line, so its mirror square touches it on the other side: D2. A4 and A1 already match.

8. B — E1

B6 and E6 match across the up-and-down line. B6 and B1 match across the across line. E6 flips down to E1, which is still white.

9. B — 4

An equilateral triangle has 3 lines, one from each corner. A kite has 1. 3 + 1 = 4.

10. A — 2

B6 and A5 already match, and F1 is on the line. D4 needs C3 and A3 needs D6: 2 more.