



GRADE 1 / WATCH MR DJ SOLVE

JOINING AND REARRANGING FLAT SHAPES

Start with the same example used in the lesson slides.



WATCH MR DJ SOLVE

Use the two matching triangles from the tool page to make a square. Draw the join in blue.

- 1 Use two matching equal-leg right-triangle pieces.
- 2 Match their longest sides.
- 3 The outside is a square.

Answer: **A square with a diagonal join.**



REMEMBER join flat shapes and rearrange the same pieces into new shapes.

Read each step and explain why it is valid. The next pages demonstrate the methods in more detail. Then use the large work areas on the numbered practice pages.



GRADE 1 / WORKED METHODS

JOINING AND REARRANGING FLAT SHAPES

Read a complete example before trying the matching method.

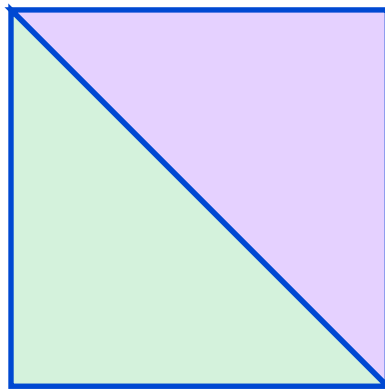


Use these examples as a reference. Keep each quantity and its unit visible. A different valid method is welcome unless a question specifically requests one.

Two triangles can fill a square

2 matching equal-leg right triangles make 1 square

1. Use the tool-page triangles: each has a square corner and two equal short sides.
2. Join their longest sides.
3. No gap or overlap remains.



Two matching right triangles fill one square



GRADE 1 / WORKED METHODS

JOINING AND REARRANGING FLAT SHAPES

Read a complete example before trying the matching method.

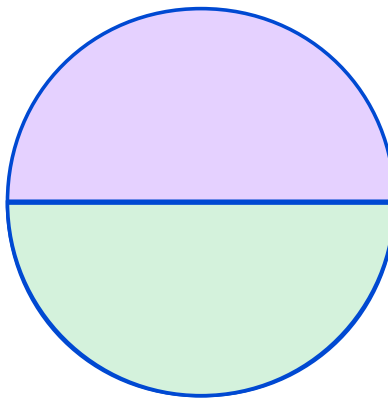


Use these examples as a reference. Keep each quantity and its unit visible. A different valid method is welcome unless a question specifically requests one.

Two half-circles fill a circle

2 half-circles make 1 circle

1. Match the straight sides.
2. Keep curved edges outside.
3. Trace the whole circle.



Two matching half-circles fill one circle



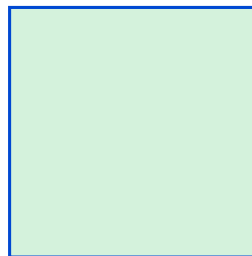
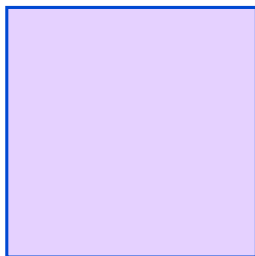
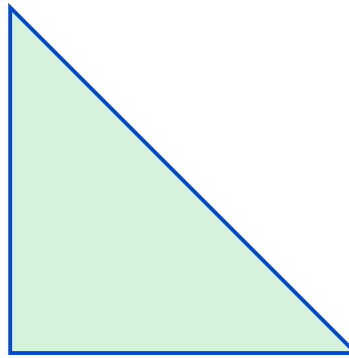
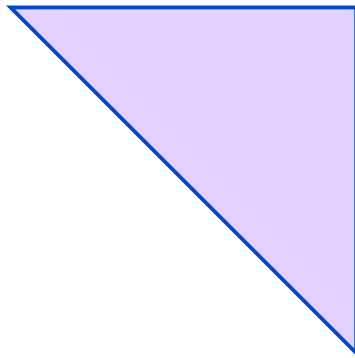
GRADE 1 / MATHEMATICAL WORK TOOL

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell.



Use real pattern blocks or these pieces. An adult may cut the outlines. Keep the pieces to try more than one design.



Adult: cut out pieces; join without gaps or overlaps.



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

◀ Mild

1. Join two blue squares side by side. What shape is the outside?

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

◀ Mild

2. Join two blue half-circles to make a whole shape. Name it.

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



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🔊 Medium

3. Join four blue quarter-circles. What whole can they make?

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

🔊 Medium

4. Build a house with a blue square and a triangle roof. Draw the pieces.

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

🔊 Medium

5. Take your blue two-square rectangle apart. Rejoin its squares one above the other. What stays?

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

🔥🔥🔥 Spicy

6. Digit overlaps the two blue triangles to make a square. Is all the space counted once?

My answer or words: _____



GRADE 1 / PRACTICE

JOINING AND REARRANGING FLAT SHAPES

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🔥🔥🔥 Spicy

7. Use the blue square made from two triangles in a new larger design. Show its original join.

My answer or words: _____



GRADE 1 / PRACTICE

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Draw, build or tell your thinking.



Use the worked-method reference when helpful. Draw, build or tell your thinking. An adult may read the directions.

Extra Spicy

8. Can the same blue two-square rectangle become a tall rectangle? Build both.

My answer or words: _____