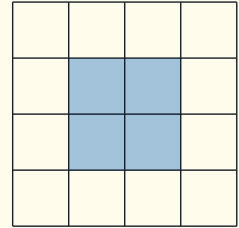


4 SQUARES TESSELLATE

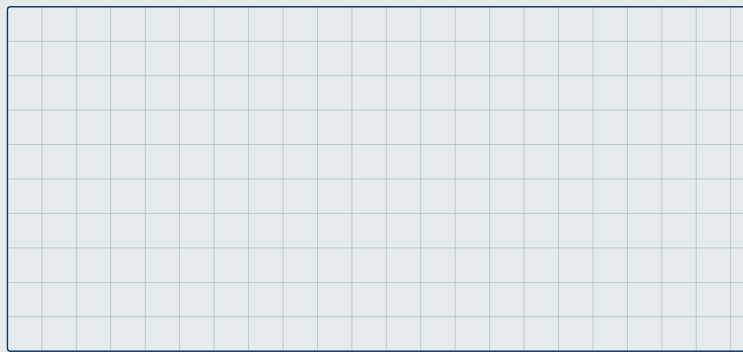
- 1 The grid shows 4 unit squares fitted edge to edge in a block.
- 2 Every shared side meets exactly, with no gap and no overlap.
- 3 The 4 corners meet in the middle and fill a full turn.
- 4 The block is one bigger square, so the squares tessellate.



WARM-UP

Use the squared space to draw each set of tiles fitting together.

Patterns



1. Draw 4 square tiles fitting together into one bigger square with no gaps.
2. Draw 6 equilateral triangles and 3 regular hexagons each meeting at one point.
3. Draw 4 circles and 5 five-sided stones side by side and mark where gaps open up.

PRACTICE

- 1 A builder lays 4 square floor tiles in a block. Draw them fitting together and say if they tessellate.
Draw 4 square tiles fitting together into 1 bigger square. Do they tessellate? = ?

? ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- a. Copies of a square fit together to cover a surface with no gaps and no overlaps.
- b. Copies of a circle laid side by side cover a surface with no gaps.
- c. Copies of a regular hexagon fit together with no gaps and no overlaps.
- d. A shape that tessellates covers a surface leaving little gaps between the copies.

IRISH FACT Bees that tile with hexagons

Honeybees build comb from **regular hexagons** that fit together with **no gaps and no overlaps**. Irish hives use this natural tessellation to store honey.

Federation of Irish Beekeepers' Associations



REFLECT Which shapes tessellate easily, and which leave gaps?