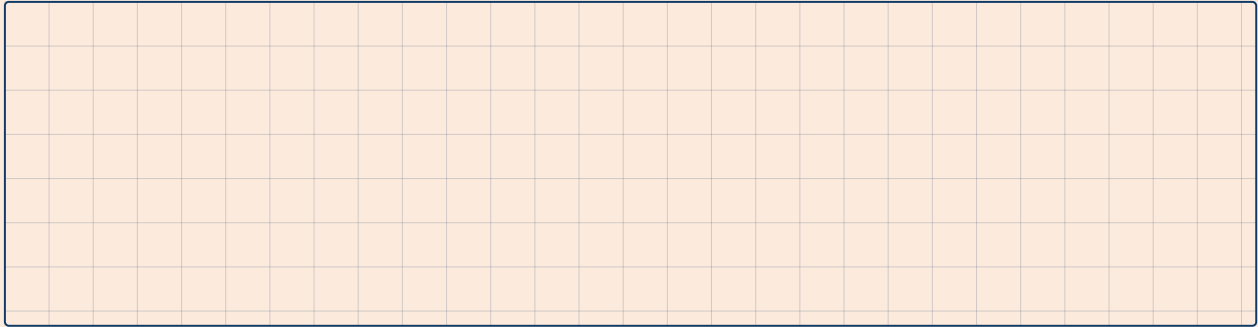


TILING A STRIP WITH SQUARES

- 1 Start by placing one square tile on the board.
- 2 Add a second square so one full edge meets the first with **no** gap.
- 3 Keep adding copies until **6** squares sit side by side and fill the strip with no overlaps.

WARM-UP

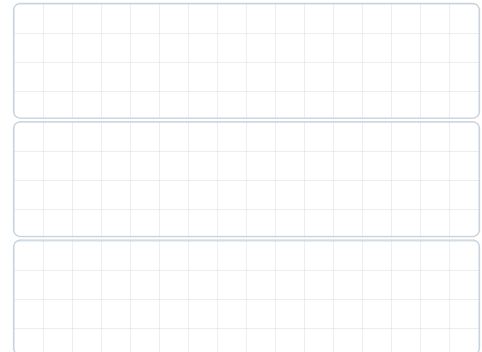
Use the squared working space to draw the tiling patterns named below.



1. Draw 4 identical squares that fit together with no gaps or overlaps
2. Draw 6 triangles meeting edge to edge like floor tiles
3. Draw 5 circles packed together so the gaps between them show clearly

PRACTICE

- 1 You are building a small toy-house floor and lay **4** square tiles. Do the squares cover the space snugly with no gaps or overlaps?
- 2 While making a wall pattern you fit **6** triangles together. Do they tessellate like floor tiles?
- 3 You pack **5** round counters to cover a building board. Do the circles fit together without leaving little gaps?



SPOT THE MISTAKE

Conor says circles tessellate. He draws them like this:

He places circles side by side.
Gaps show between every circle.
He says: 'They fit together, so they tessellate.'

Conor is wrong. Why do circles not tessellate?

IRISH FACT Hexagons in the hive

Honeybees in Ireland build combs from regular **hexagons** that fit edge to edge with **no gaps**. Each cell shares sides with **six** neighbours.

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REFLECT

Which shapes tiled with no gaps for you, and which left spaces?

