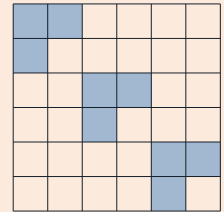


Module assessment – tessellate a quilt block

WHAT THIS LESSON TEACHES

Shapes **tessellate** when they fit together with **no gaps** and **no overlaps**, covering a flat surface. The angles meeting at every point must add up to exactly **360°**.

- **Squares** tessellate — four squares meet at a point: $4 \times 90^\circ = 360^\circ$.
- **Equilateral triangles** tessellate — six meet at a point: $6 \times 60^\circ = 360^\circ$.
- **Regular pentagons do NOT tessellate** — three pentagons leave a 36° gap ($3 \times 108^\circ = 324^\circ$).



DISCUSSION STARTER

REFLECT Which 2D shape was easiest to draw with a protractor? Which was trickiest?

ANSWER KEY

- a) **Square:** tessellates ($4 \times 90^\circ = 360^\circ$)
- b) **Equilateral triangle:** tessellates ($6 \times 60^\circ = 360^\circ$)
- c) **Regular hexagon:** tessellates ($3 \times 120^\circ = 360^\circ$)
- d) **Regular pentagon:** does not ($3 \times 108^\circ = 324^\circ$)
- e) **Regular octagon:** does not on its own ($3 \times 135^\circ = 405^\circ$)

f) **Regular dodecagon:** does not on its own ($3 \times 150^\circ = 450^\circ$)

Q1: a rectangle

Q2: 1 line

Q3: reflection

Q4: 99°

EXTENSION SHEET · STRETCH ANSWERS

S1: reflection

S2: 307° is reflex

S3: a regular hexagon

S4: an isosceles trapezium

S5: reflection