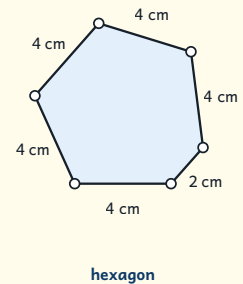


Regular and irregular polygons – pentagon, hexagon and octagon

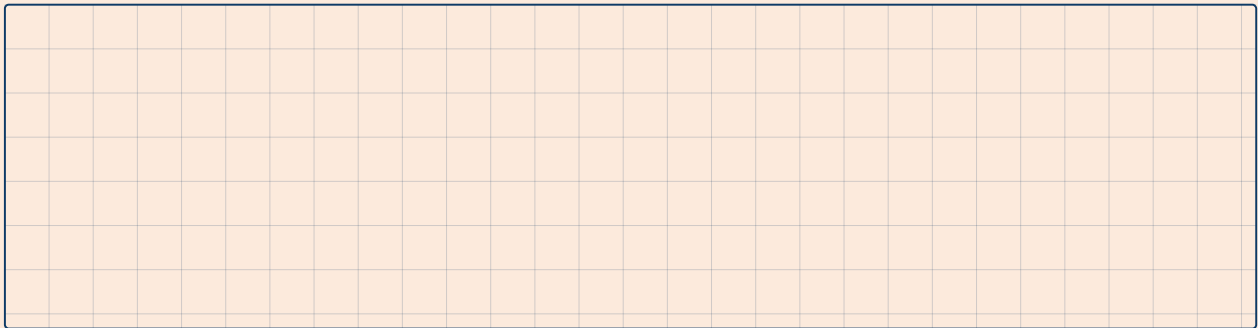
IS THIS HEXAGON REGULAR OR IRREGULAR?

- Count the straight sides: this shape has **6** sides, so it is a hexagon.
- Compare the side lengths shown: five sides are **4 cm** but one side is only **2 cm**.
- At least one side is different, so this hexagon is **irregular**.



WARM-UP

Use the squared space to draw the polygons named below.



- Draw a regular hexagon with all 6 sides equal, like the honeycomb cell.
- Draw an irregular hexagon with five 3 cm sides and one 7 cm side.
- Draw a regular octagon with all 8 sides equal to 5 cm and label how many sides it has.

PRACTICE

- In craft class Aoife folds a paper shape with **5** equal straight sides and **5** matching corners. Is her shape regular or irregular?
- Niamh cuts a hexagon for a model, with five sides of **4 cm** and one side of **2 cm**. Is her hexagon regular or irregular?



? ALWAYS, SOMETIMES, NEVER

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

- A regular polygon has all its sides equal. ☐
- A hexagon has 6 straight sides. ☐
- A polygon has a curved side. ☐
- A hexagon is regular. ☐

IRISH FACT Hexagons at the Giant's Causeway

The Giant's Causeway in County Antrim has about **40,000** interlocking basalt columns — most of them are **regular hexagons** with six equal sides and six equal angles.

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REFLECT

How can you tell at a glance whether a polygon is regular or irregular?