Y5 Regular Irregular Polygons

KS2 Y5 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Is a square a regular polygon?

Step 1 · Sides

all 4 sides are equal

Step 2 · Angles

all 4 angles are 90°

Answer: Yes, a square is a regular quadrilateral

Check: Both conditions are true ✓

2. Now try one with the steps

Is a rectangle that is 6 cm by 3 cm regular?

Step 1 · Angles

Step 2 · Sides

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. What is a polygon?

2. What two things must be equal in a regular polygon?

3. What is the name of a regular triangle?

4. What is the name of a regular quadrilateral?

5. How many sides does an octagon have?

6. Is a right-angled triangle with sides 3 cm, 4 cm and 5 cm regular or irregular?

7. A regular hexagon has sides of 4 cm. What is its perimeter?

8. A regular octagon has a perimeter of 64 cm. How long is each side?

9. Is every rectangle irregular? Write yes or no and explain.

10. Each angle of a regular hexagon is 120°. What is the total of its angles?

11. A shape has 5 equal sides but its angles are 90°, 90°, 150°, 60° and 150°. Is it regular?

12. What is the name of a polygon with 10 sides?

13. A regular polygon has sides of 9 cm and a perimeter of 63 cm. How many sides does it have, and what is it called?

14. Why is a circle not a polygon?

4. Before you hand it in

Saying a rectangle is regular because all its angles are equal.
A regular polygon needs equal sides AND equal angles. A non-square rectangle has unequal sides.

Saying a rhombus is regular because all its sides are equal.
Check the angles too. A rhombus usually has two acute and two obtuse angles.

Thinking a shape is only a 'hexagon' if it looks like a honeycomb cell.

Any closed shape with 6 straight sides is a hexagon. The honeycomb one is a regular hexagon.