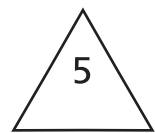
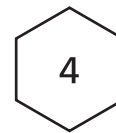
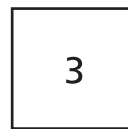
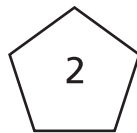




1 Match.

- | | |
|-------------------------------|-----------------------------------|
| 1 A line is | a measures 90°. |
| 2 An intersection is where | b meet at a right angle. |
| 3 Parallel lines | c two lines cross. |
| 4 A right angle | d meet an angle. |
| 5 Perpendicular lines | e never meet. |
| 6 A vertex is where two lines | f an interval between two points. |

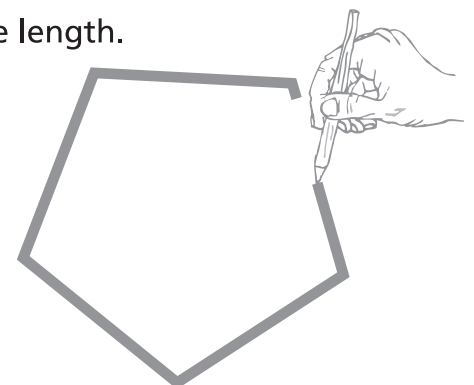
2 Match and write.



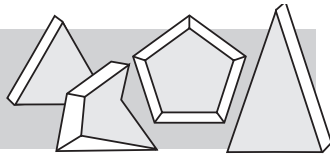
- a A triangle has got three sides and three angles.
- b A rectangle has got _____ sides and _____ angles.
- c A _____ has got four sides and _____ angles.
The four _____ are the same length and the four angles are the same.
- d A _____ has got five sides and _____ angles.
- e A hexagon has got _____ sides and _____ angles.

3 Draw the shapes in your notebook.

- 1 The three sides of an equilateral triangle are the same length. All the angles measure 60°.
- 2 An isosceles triangle is irregular. Two of the sides are the same length.
- 3 The five sides of a regular pentagon are the same length.
- 4 The five sides of an irregular pentagon are different lengths.
- 5 The six sides of a regular hexagon are the same length.
- 6 The six sides of an irregular hexagon are different lengths.



Geometry.



Aim

- To introduce basic concepts of geometry and shapes.

Language focus

Key vocabulary: *circle, line, intersection, parallel and perpendicular lines, right angle, side, angle, measure, shape, cross, vertex, point, equilateral/isosceles triangle, rectangle, square, pentagon, hexagon, regular, irregular, degrees.*

Key language: *An intersection is where two lines cross. A triangle has got three sides and three angles. The five sides of a regular pentagon are the same length.*

Materials

- Worksheet.
- Ruler.

Warm-up

- Draw a circle on the board. Ask the pupils *What is it? It's a circle.* Elicit the names of things that are round, eg, the sun, a clock, a watch, a coin, a paper bin, a light. Teach the word *circle* and write it on the board.

Completing the Worksheet

Activity 1

- Play *Simon says*. Ask the pupils to stand up and touch some objects in the classroom, eg, (*Simon says*) *touch a desk, the floor, the board, the wall, a book, a circle, a square.* Stress *circle* and *square*.
- Ask a pupil to come to the front and touch the board. Show the pupils the four sides of the board. Write *side* on the board. Ask the pupils to touch the sides of their desks. *How many sides has your desk got?* Continue with other objects, eg, *book, door, notebook.*
- Draw a line on the board and ask the pupils *What's this? It's a line.* Write *line* on the board and say the word a few times. Use pictures and simple definitions to explain the words in Activity 1, eg, *a line* (draw two points, then a line joining them); *intersection – the point*

where two lines cross; parallel lines – two lines that never meet; a right angle – an angle that measures 90°; perpendicular lines – two lines that meet at a right angle; side (show them the four sides of the board or desk); *vertex – the point where two lines meet at an angle* (point to a corner of the board).

- Bring a pupil to the front of the class. Give instructions to practise the new language, eg, *Draw a line. Draw two parallel lines. Draw a circle. Touch the sides of the board. Point to a right angle. Draw two perpendicular lines.* Invite some more pupils to come to the front and follow your instructions.

- Ask the pupils to do Activity 1.

Answers: 1-f; 2-c; 3-e; 4-a; 5-b; 6-d

Activity 2

- Draw a triangle on the board. Say *triangle* and encourage the pupils to repeat the word a few times. Ask the pupils *How many sides has a triangle got? Three! How many angles? Three.* Show the class the sides and the angles. Continue with *rectangle, square, pentagon* and *hexagon*. Encourage the pupils to use the structure *A _____ has got _____ sides. A _____ has got _____ angles.* Write this structure on the board.
- Look at the shapes in Activity 2 with the pupils and go through the names. Elicit sentences about the different shapes.
- Ask the pupils to write the names of the shapes and complete the sentences in Activity 2.

Answers: 1-rectangle; 2-pentagon; 3-square; 4-hexagon; 5-triangle b-four/four; c-square/four/sides; d-pentagon/five; e-six/six

Extra activity

Invite some pupils to draw the shapes in Activity 2 on the board. Bring a pupil to the board and point to one of the shapes. Ask the pupil *How many sides and angles has it got?* Encourage the pupil to use the structure *A _____ has got _____ sides and _____ angles.* Teacher: *Pentagon.* Pupil: *A pentagon has got five sides and five angles.* The pupils can then continue in small groups.

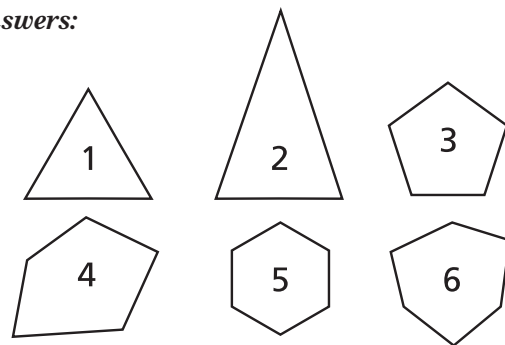
Activity 3

- Show the pupils a ruler. Draw an equilateral triangle on the board (with three equal sides). Ask the pupils *How many sides has it got? Three! Are the three sides the same length? Yes! Are the angles the same? Yes.* Explain that this is an *equilateral triangle. It is a regular triangle.* Follow the same procedure for an *isosceles triangle* (with two sides the same length). Explain that this is an *irregular triangle.*
- Explain the difference between regular and irregular shapes. *In regular shapes all the sides are the same length and all the angles are the same. In irregular shapes the sides are different lengths and the angles are different.* Give some example using regular and irregular pentagons and hexagons.
- Divide the board into two halves. Write *regular shapes* on one side and *irregular shapes* on the other. Bring two pupils to the board, one on each side. Ask them to draw a triangle. Encourage the pupil on the *regular shapes* side of the board to draw an equilateral triangle with three sides the same

length. Encourage the pupil on the *irregular shapes* side to draw a triangle with sides of different lengths. Compare the two triangles. Which one is more difficult to draw? Probably the regular one. Invite other pupils to draw different shapes.

- The pupils read the sentences and draw the shapes in Activity 3. It's not important if the shapes don't come out perfect as long as they have got the correct number of sides and look regular or irregular.

Answers:



Extension activity

Ask the pupils to colour the shapes, eg, *Colour the regular hexagon blue.*