Look at these shapes.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Complete the sentences below.
One has been done for you.
$\qquad$ is a kite
is not a quadrilateral
has only 2 right angles
has 2 acute angles

2 Here are four triangles on a square grid.


Write the letters of the two isosceles triangles.


3 This square has two dots on each side.
The dots are equally spaced.
Join two dots to divide the square into two equal parts.
Use a ruler.


Here is a regular octagon with two vertices joined to make the line $A B$. Join two other vertices to draw one line that is parallel to the line $A B$.


Here is the octagon again.
Join two vertices to draw one line that is perpendicular to the line $A B$.


5 Here is a diagram for sorting shapes.
One of the shapes is in the wrong place.
Put a cross (X) on it.


Here are six rectangles on a grid.


Which two rectangles fit together, without overlapping, to make a square?


7 A square always has four sides.
Is it true that a four-sided shape is always a square?
Circle Yes or No. Yes / No
Explain how you know.


8
This diagram shows a square with dots at the vertices and at the middle of each side.
The square is divided into four triangles, $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$.


Write the letters of all the triangles that have a right angle.
$\qquad$

Write the letters of all the triangles that have two equal sides.
$\qquad$
1 mark

9 Here are four shapes.


They can be fitted together in a straight line so that there are no gaps between them.
Write the order of the letters of the shapes when they all fit together.


10 Here are four shapes in a Carroll diagram.

|  | Regular | Not regular |
| :--- | :--- | :--- |
| Quadrilateral |  |  |
| Not a <br> quadrilateral |  |  |

Use this information to write the letters $\mathbf{A}, \mathbf{B}$ and $\mathbf{D}$ in the Venn diagram below.


1
Award TWO marks for all three letters in the correct order as shown:
F
E
B
If the answer is incorrect, award ONE mark for two of the three letters correct.
Up to 2
[2]

## 2 B AND C

## Answers may be given in either order.

3 Dots joined to divide square into two congruent parts, eg

OR


Accept slight inaccuracies in drawing.
Accept more than one answer if all are correct.

4 (a) Two vertices joined as shown:


OR


Accept slight inaccuracies in drawing provided the intention is clear.
Accept two lines if both are correct.
(b)


OR


OR


Accept slight inaccuracies in drawing, provided the intention is clear.
Accept more than one line if all are correct.
Accept a line perpendicular to $A B$, drawn from one vertex, which meets or crosses $A B$, eg


5 One shape crossed as shown:


Do not award the mark if additional incorrect shapes are indicated. Accept alternative unambiguous indications of the correct shape, eg shape ticked or circled.

7 An explanation which recognises that a quadrilateral must have particular properties to be a square, eg:

- 'It can only be a square if all the angles are right angles'
- 'It can only be a square if all the sides are equal'


## OR

an explanation (or diagram) which recognises that there are quadrilaterals other than squares, eg:

- 'It could be a rectangle'
- 'A rhombus has four sides'
- 'It could be a kite or a trapezium or a parallelogram'
- 'It could be an oblong'
- 'The sides could be unequal'
- 'The angles might be different'
- 



No mark is awarded for circling 'No' alone.
Do not accept vague or incomplete explanations, eg:

- 'It might not be a square'
- 'Not all four-sided shapes are squares'
- 'A four-sided shape is a quadrilateral'
- 'It could be a diamond'.

If 'Yes' is circled but a correct, unambiguous explanation is given, then award the mark.

8 (a) A AND B AND D
Letters may be given in any order.
(b) A AND C

Letters may be given in any order.

## 9 D B A C

Accept C A B D.

10 Award TWO marks for the three letters written in the correct regions as shown:


If the answer is incorrect, award ONE mark for two letters written in the correct regions.

Do not accept letters written in more than one region.
Accept alternative unambiguous indications, eg lines drawn from the shapes to the appropriate regions of the diagram.
Accept unambiguous shapes drawn in the appropriate regions of the diagram.

Up to 2 (U1)

