

Homework/Extension

Step 3: Count Vertices on 2D Shapes

National Curriculum Objectives:

Mathematics Year 2: (2G2a) [Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Count the number of vertices in a picture made with 2D shapes. Shapes used are all regular and have the same orientation.

Expected Count the number of vertices in a picture made with 2D shapes. Shapes used are regular and irregular and have different orientations.

Greater Depth Count the number of vertices in a picture made of 2D shapes. Complete the picture so that it has a given total number of vertices. Shapes used are regular and irregular and have different orientations.

Questions 2, 5 and 8 (Varied Fluency)

Developing Match the picture of a 2D shape to its name and the correct number of vertices. Shapes used are all regular and have the same orientation.

Expected Match the picture of a 2D shape to its name and the correct number of vertices. Shapes used are regular and irregular and have different orientations.

Greater Depth Work out and complete the missing pictures and labels in order to match pictures of 2D shapes to their names and correct number of vertices.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Label sets of shapes to show how they have been sorted according to the number of vertices. Shapes used are all regular and have the same orientation.

Expected Label sets of shapes to show how they have been sorted according to the number of vertices. Shapes used are regular and irregular with different orientations.

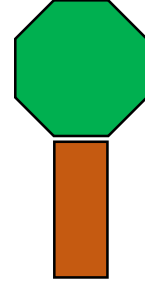
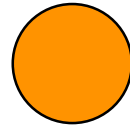
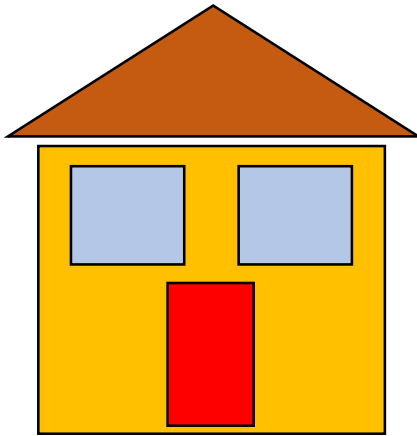
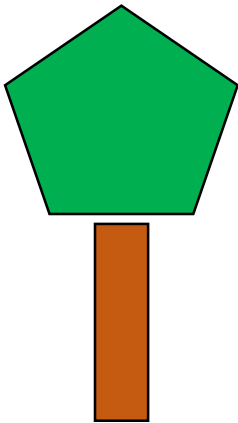
Greater Depth Label sets of shapes to show how they have been sorted according to the number of vertices. Irregular shapes and names of shapes used.

More [Year 2 Properties of Shape](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Count Vertices on 2D Shapes

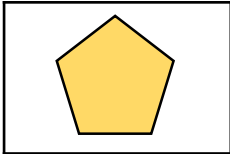
1. Count the number of vertices you can see in the picture below.



VF
HW/Ext

2. Join the matching sets.

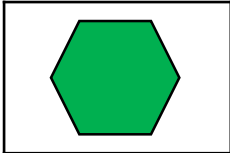
A.



6 vertices

octagon

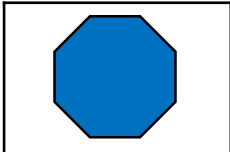
B.



5 vertices

hexagon

C.



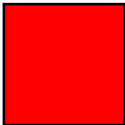
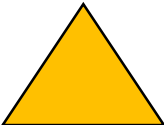
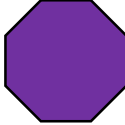
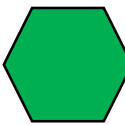
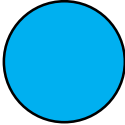

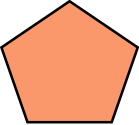
8 vertices

pentagon



VF
HW/Ext

3. The shapes below have been sorted into the table by their vertices. Write an appropriate heading for each of the columns.

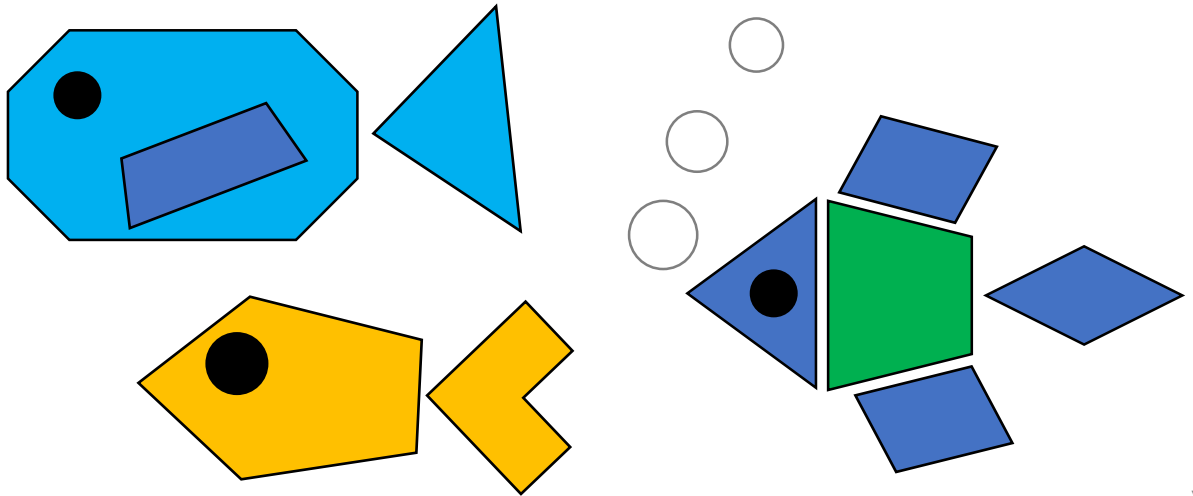
			
			



RPS
HW/Ext

Count Vertices on 2D Shapes

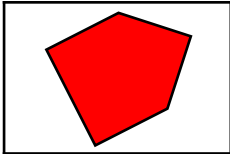
4. Count the number of vertices you can see in the picture below.



VF
HW/Ext

5. Join the matching sets.

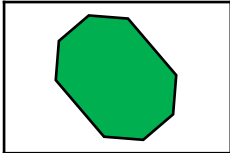
A.



8 vertices

hexagon

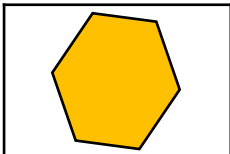
B.



6 vertices

octagon

C.



5 vertices

pentagon



VF
HW/Ext

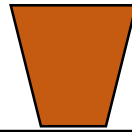
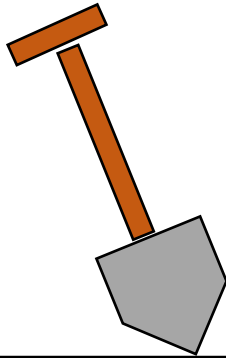
6. The shapes below have been sorted into the table by their vertices. Write an appropriate heading for each of the columns.



RPS
HW/Ext

Count Vertices on 2D Shapes

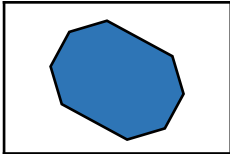
7. Complete the picture below. When completed, the picture must have a total of 50 vertices.



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8. Complete the missing labels to make matching sets.

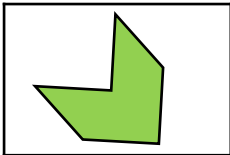
A.



5 vertices

hexagon

B.



vertices

C.

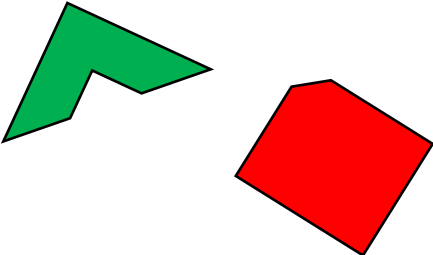
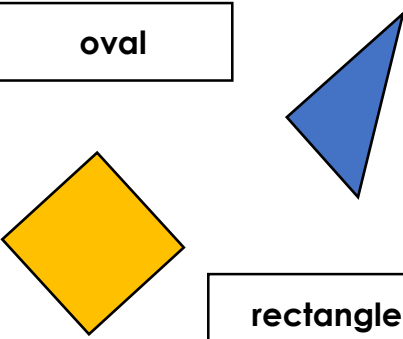


vertices



VF
HW/Ext

9. The shapes below have been sorted into the table by their vertices. Write an appropriate heading for each of the columns.

 <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">octagon</div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto 10px auto;">oval</div>  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">rectangle</div>
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RPS
HW/Ext

Homework/Extension

Count Vertices on 2D Shapes

Developing

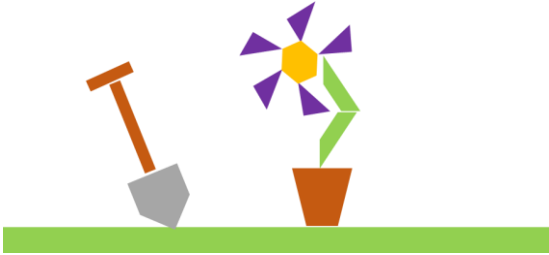
1. 40
2. A. 5 vertices, pentagon; B. 6 vertices, hexagon; C. 8 vertices, octagon
3. Various answers, for example: Fewer than 5 vertices; 5 vertices or more

Expected

4. 45
5. A. 5 vertices, pentagon; B. 8 vertices, octagon; C. 6 vertices, hexagon
6. Various answers, for example: 6 vertices or more; fewer than 6 vertices

Greater Depth

7. 29 vertices need to be added. Various answers, for example:



8. A. 8 vertices, octagon; B. 6 vertices, hexagon; C. picture of a pentagon, 5 vertices, pentagon
9. Various answers, for example: 5 vertices or more; fewer than 5 vertices