

Homework/Extension

Step 6: Parallel and Perpendicular

National Curriculum Objectives:

Mathematics Year 3: (3G2) [Identify horizontal and vertical lines and pairs of perpendicular and parallel lines](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Sort the capital letters into the Venn diagram using knowledge of parallel and perpendicular lines. Lines within capital letters may be presented vertically or horizontally and letters are in standard orientation.

Expected Sort the capital letters into the Venn diagram using knowledge of parallel and perpendicular lines. Lines within capital letters may be presented vertically, horizontally or diagonally and letters may not be in standard orientation.

Greater Depth Sort the capital letters into the Venn diagram using knowledge of parallel and perpendicular lines. Lines within capital letters may be presented vertically, horizontally or diagonally. Letters may not be in standard orientation and may have a hidden section.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify objects which contain perpendicular lines. Objects will be presented in standard orientation.

Expected Identify objects which contain parallel lines. Objects may not be presented in the standard orientation.

Greater Depth Identify objects which contain more than five sets of perpendicular lines. Objects may be presented in different orientations.

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

Developing Explain whether a statement is correct or incorrect using knowledge of parallel lines. Lines may be presented vertically or horizontally.

Expected Explain whether a statement is correct or incorrect using knowledge of perpendicular lines. Lines may be presented horizontally, vertically or diagonally.

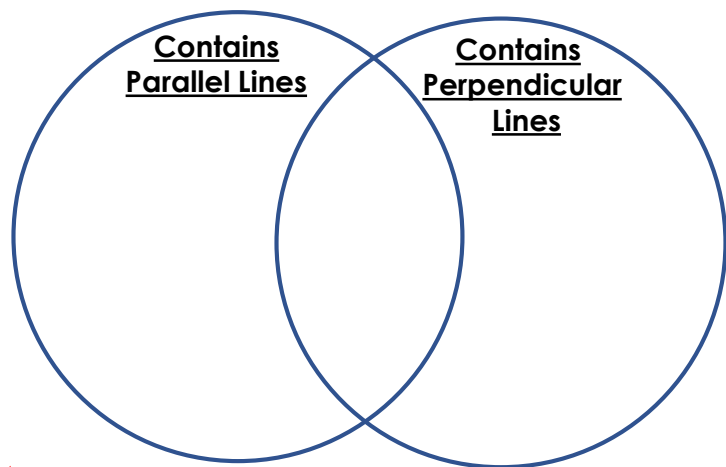
Greater Depth Explain whether a statement is correct or incorrect using knowledge of parallel and perpendicular lines. More than 2 lines may be presented vertically, horizontally or diagonally.

More [Year 3 Properties of Shapes](#) resources.

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

Parallel and Perpendicular

1. Sort the capital letters into the Venn diagram below.



O L H
 F G
 S



VF
HW/Ext

2. Circle the objects which contain perpendicular lines.

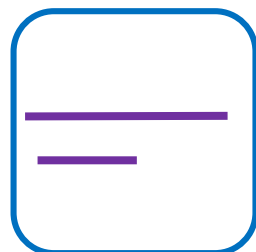
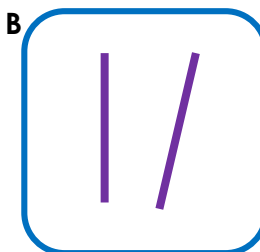
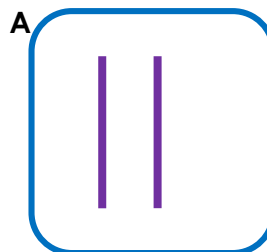


VF
HW/Ext

3. Zak is drawing lines.



All of the lines that I have drawn are parallel.



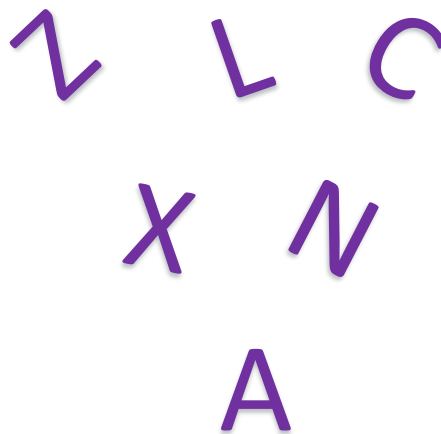
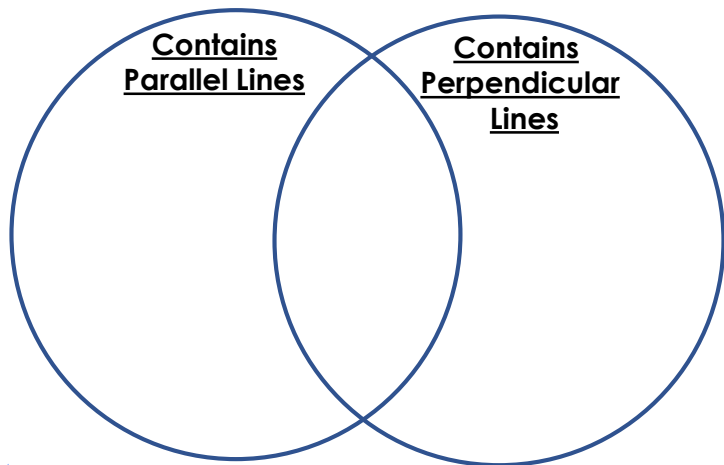
Is Zak correct? Explain your answer.



RPS
HW/Ext

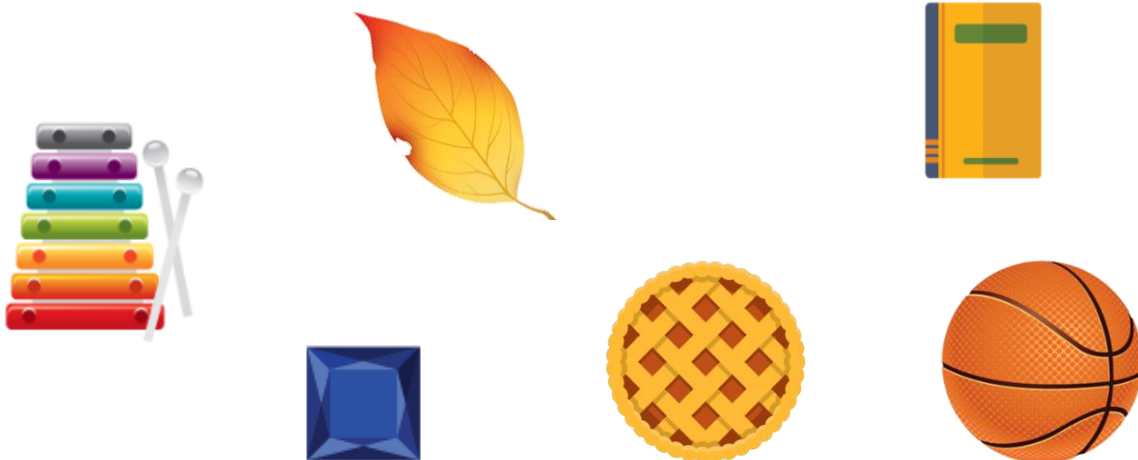
Parallel and Perpendicular

4. Sort the capital letters into the Venn diagram below.



VF
HW/Ext

5. Circle the objects which contain parallel lines.

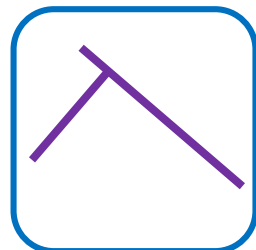
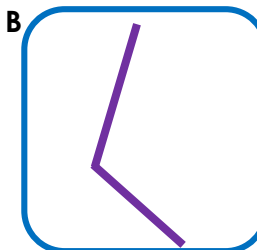
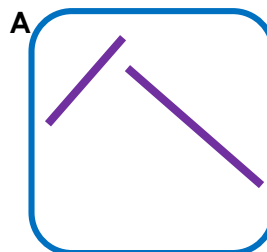


VF
HW/Ext

6. Thomas is drawing lines.



All of the lines that I have drawn are perpendicular.



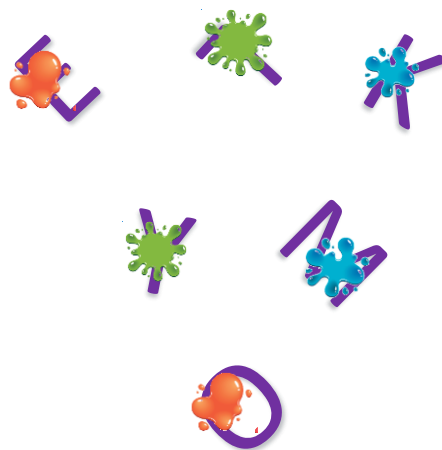
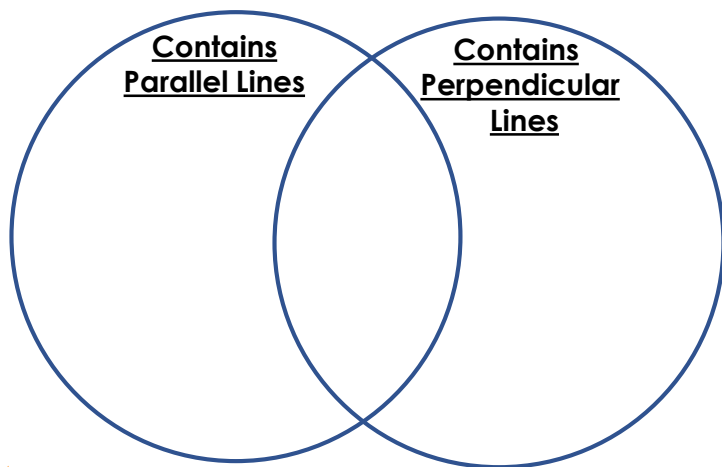
Is Thomas correct? Explain your answer.



RPS
HW/Ext

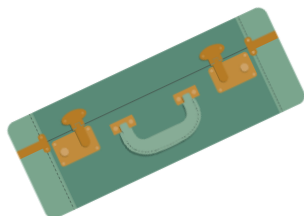
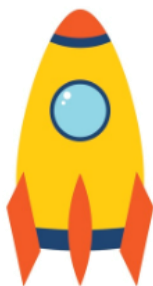
Parallel and Perpendicular

7. Sort the capital letters into the Venn diagram below.



VF
HW/Ext

8. Circle the objects which have more than 5 sets of perpendicular lines.

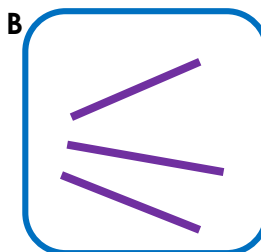
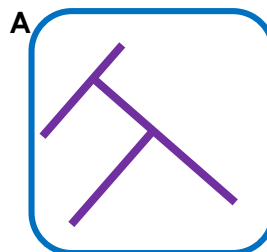


VF
HW/Ext

9. Sophia is drawing lines.



All of the lines that I have drawn are parallel or perpendicular.



Is Sophia correct? Explain your answer.



RPS
HW/Ext

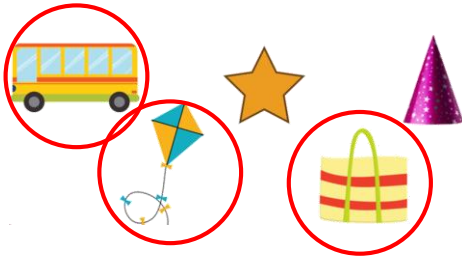
Homework/Extension

Parallel and Perpendicular

Developing

1. Contains perpendicular lines: L ; Middle section: H, F
Letters which do not fit into the diagram: O, G, S

2.



3. Zak is incorrect. The lines in box A and box C are parallel but the lines in box B are not as the gap between the lines is getting closer and they would eventually meet if they were continued.

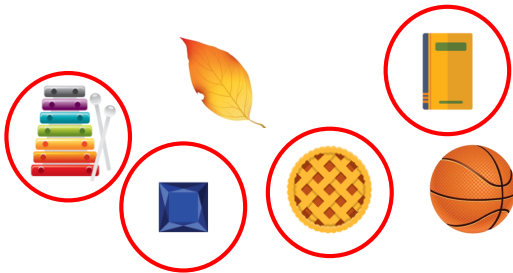
Expected

4. Contains parallel lines: Z, N

Contains perpendicular lines: L

Letters which do not fit into the diagram: A, X, C

5.



6. Thomas is incorrect. The lines in box C are perpendicular, however the lines in box A do not meet so cannot be perpendicular and the lines in box B are larger than a right angle so also cannot be perpendicular.

Greater Depth

7. Contains parallel lines: M

Middle section: E

Contains perpendicular lines: T,

Letters which do not fit into the diagram: K, Y, O

8.



9. Sophia is incorrect. The lines in box A are perpendicular, the lines in box C are parallel but the lines in box B are neither parallel nor perpendicular as they do not create any right angles and if the lines continued, they would eventually meet.