

Topic Check In - 8.01 Conventions, notations and terms

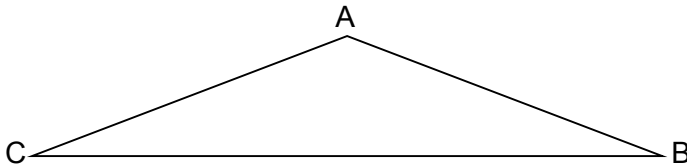
1. Complete the statement.

A cuboid has 6 _____.

2. Write the full mathematical name of the 2D shape described below.

The shape has five sides, each the same length.
The angles of the shape are all the same size.

3. Identify the obtuse angle in the diagram below.



4. Look at the diagram in question 3.
 $AB = AC$. How should this be marked on the diagram?
5. Explain what is meant by a pair of perpendicular lines.
6. Jane thinks of a quadrilateral. She states that for her quadrilateral "At least two side lengths are equal, but the diagonal lengths are not equal". Adam, Bob and Charlie all draw different types of quadrilateral. What shapes do they draw?
7. Two identical trapeziums are joined whole edge to whole edge to create a parallelogram.
Draw this parallelogram, showing how the two trapeziums are joined.
Use appropriate labels and explain why the quadrilateral is a parallelogram.
8. Triangle ABC is isosceles.
Julie says, "Angle ABC must be obtuse and so angles BAC and BCA must be acute".
Julie has made at least two mistakes. Explain two mistakes that she has made.
9. Peter has a set of identical tiles. He discovers that he can join two of his tiles to make a shape that is the same type of shape as his individual tiles. Find all the different shapes where this would be true.
10. Point A (0, 4) and point B (2, 1) are reflected in the line $x = 0$. Name the shape that would be formed by connecting together all the points.



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Extension

- Step 1: Draw two circles that intersect.
- Step 2: Mark each centre and the points of intersection.
- Step 3: Join these four points to create a quadrilateral.
- Step 4: Name the quadrilateral.

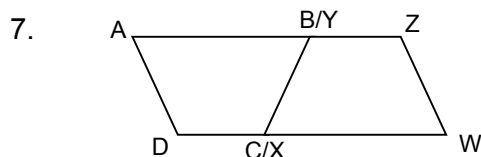
Repeat steps 1 to 4 to create as many different quadrilaterals as possible.



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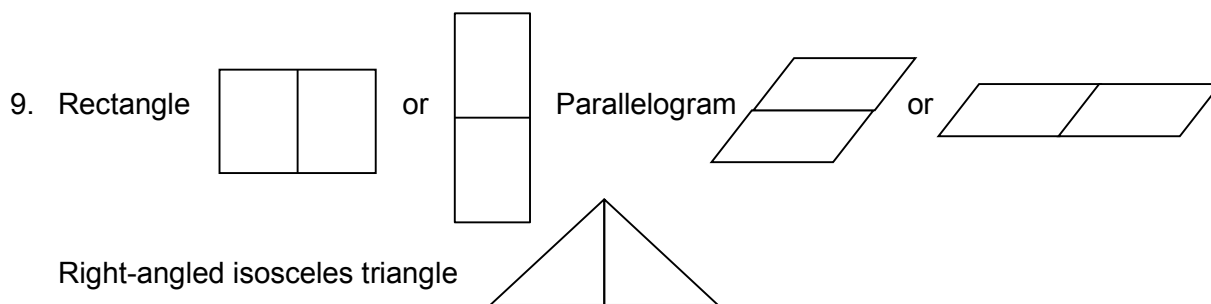
Answers

1. Faces
2. Regular pentagon
3. Angle CAB
4. Put a dash on line AB and on line AC
5. They are at right angles
6. Three possible quadrilaterals from kite, parallelogram, irregular quadrilateral and irregular trapezium.



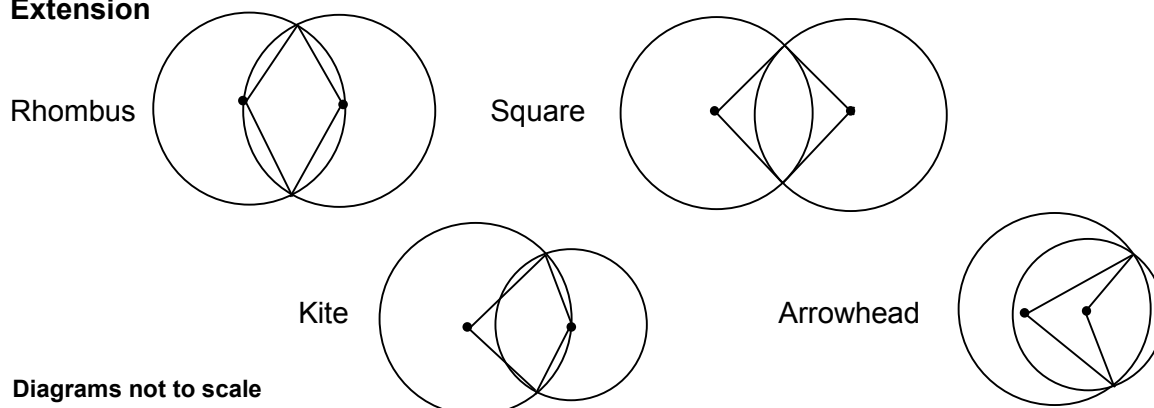
Since $AB = WX$ and $YZ = CD$ then $AB + YZ = WX + CD$
and $AD = ZW$.
Angle $A = \text{Angle } W$ and Angle $D = \text{Angle } Z$.

8. ABC could be acute.
 BAC (or BCA) could be obtuse (response will depend on how triangle is labelled).



10. Isosceles triangle, where point A is on the line of reflection and point B reflects to $(-2, 1)$.

Extension



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Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Use correct terms for 3D shapes.			
AO1	2	Use correct terms for polygons.			
AO1	3	Recognise types of angles.			
AO1	4	Use standard notation for labelling diagrams.			
AO1	5	Define perpendicular lines.			
AO2	6	Understand properties of quadrilaterals.			
AO2	7	Use standard notation to present mathematical explanations.			
AO2	8	Assess the validity of an argument.			
AO3	9	Use properties of 2D shapes to solve a problem.			
AO3	10	Use coordinates in a geometry problem.			

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