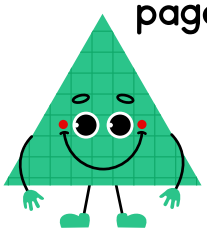
virtual au pair

grade 4
2D shapes

- properties of 2D shapes
- characteristics
- draw 2D shapes
- 2D shapes in 3D figure



Question 1: What shape's characteristic is mentioned here?

1.1) A shape with four sides of equal length and four angles of equal size. _____

1.2) Two pairs of opposite sides of equal length and four angles of equal size. _____

1.3) Three straight sides : _____

1.4) Four sides of equal length and opposite angles of equal size. _____

1.5) 7 straight sides : _____

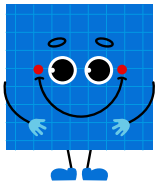
1.6) Four straight sides with adjacent sides of equal length: _____

1.7) 2D shape with one curved side: _____

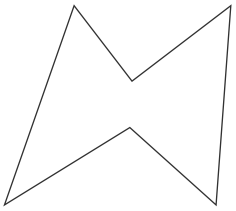
1.8) 8 straight sides : _____

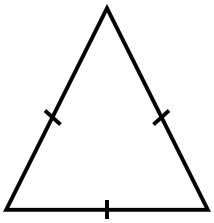
1.9) Four straight sides with one pair of opposite sides parallel : _____

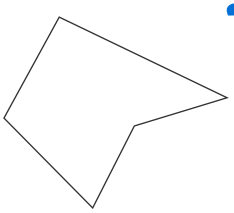
1.10) Five straight sides, all of equal length: _____



Question 2: Write under each shape: polygon/non-polygon.







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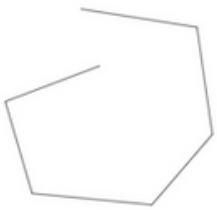
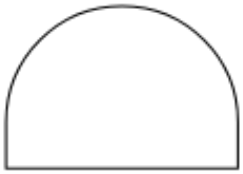
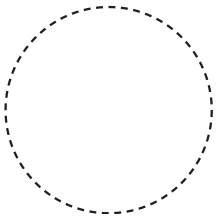
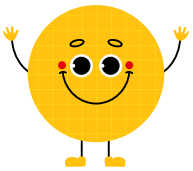


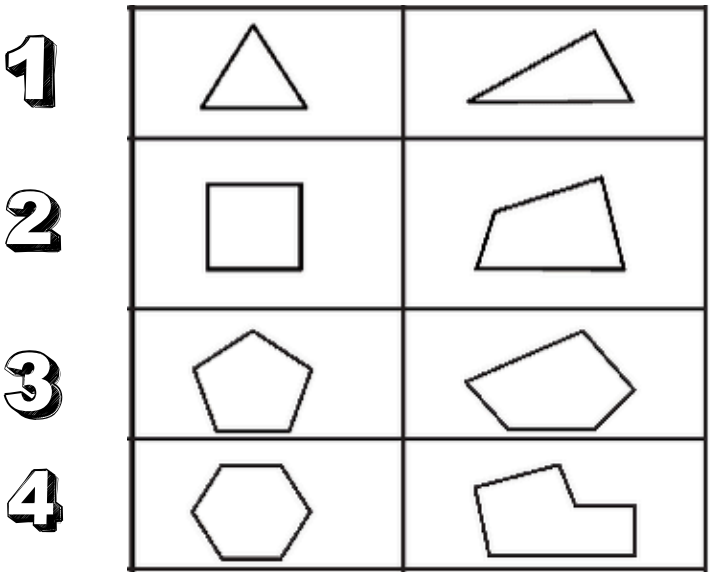




_____ _____ _____

Question 3: Study the following table and answer the questions.





3.1) Are all the shapes in the table polygons? Give a reason

_____

3.2) Which side of the table will be regular polygons? Give a reason

_____

3.3) What is meant by irregular polygons?

_____

3.4) Could both shapes in the third row be called pentagons? Give a reason?

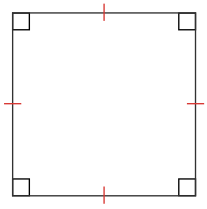
_____

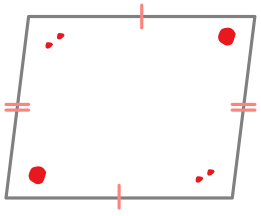
3.5) Give a suitable name for each of the shapes in row 4 and explain the difference between the two shapes. The names of the shapes are not exactly the same.

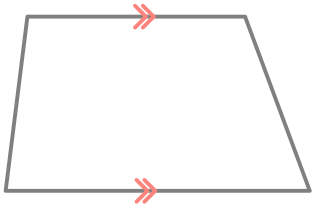
_____

_____

Question 4: Name the shape by looking at the properties given.







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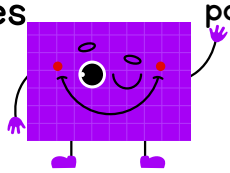
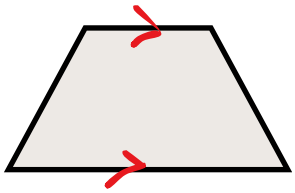
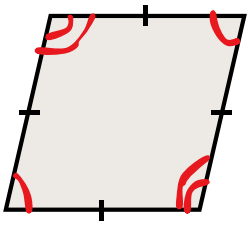
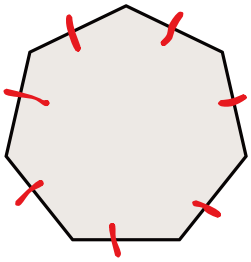
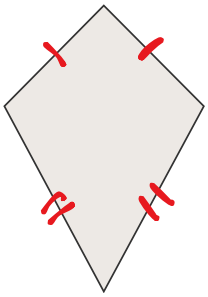
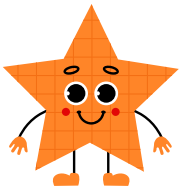


Question 5: Complete the table.

shape	curved sides straight sides	characteristics	regular or irregular
 name: _____			
 name: _____			
 name: _____			
 name: _____			

question 6: discuss differences and similarities



6.1) Name one similarity between a square and a rhombus.

_____

6.2) Name one difference between a square and a rhombus.

_____

6.3) Name one similarity and one difference between a rectangle and a parallelogram.

_____

_____

_____

6.4) Name one difference and one similarity between a regular and irregular hexagon.

_____

_____

_____

6.5) Name one difference and one similarity between a square and a triangle.

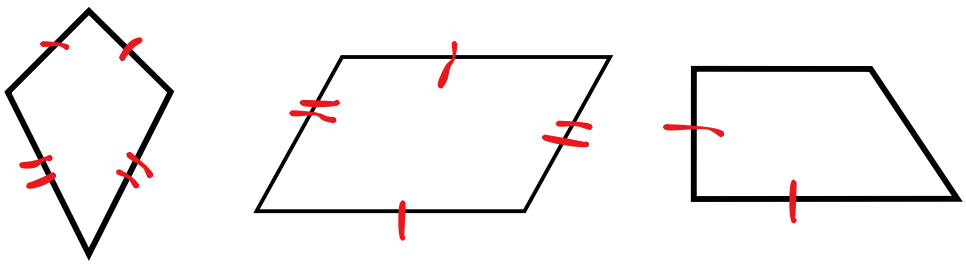
_____

_____

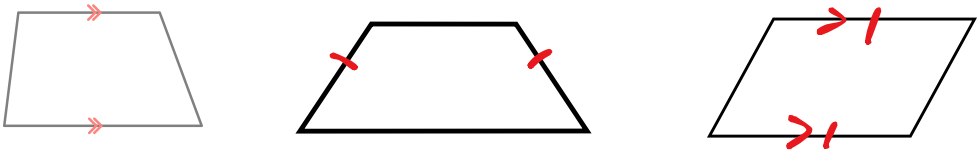
_____

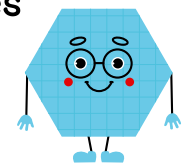
question 7: terms related to properties

7.1) Select the shapes where it is indicated that adjacent sides are of equal length. Mark with a cross.

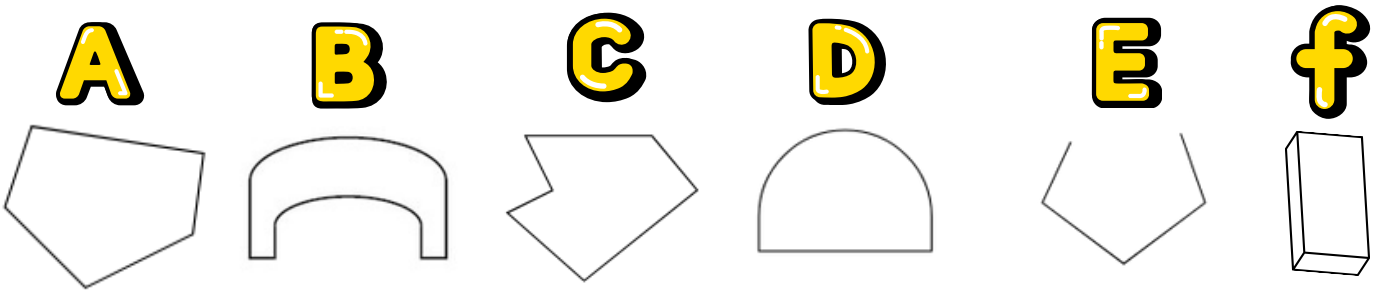


7.2) Which shape would fit the property: one pair of opposite sides equal in length, but not parallel.





Question 8: Study the shapes and answer the questions.



8.1) Which shapes have curved sides as well as straight sides? _____

8.2) Which shapes are polygons? _____

8.3) Why would shape E not be considered a polygon?

_____

8.4) What shape is a hexagon? _____

8.5) What shape is a pentagon? _____

8.6) Is F a polygon? Give a reason

_____

Question 9: Draw 2D shapes

9.1) Draw a freehand sketch of a rhombus and a kite and indicate all the properties.

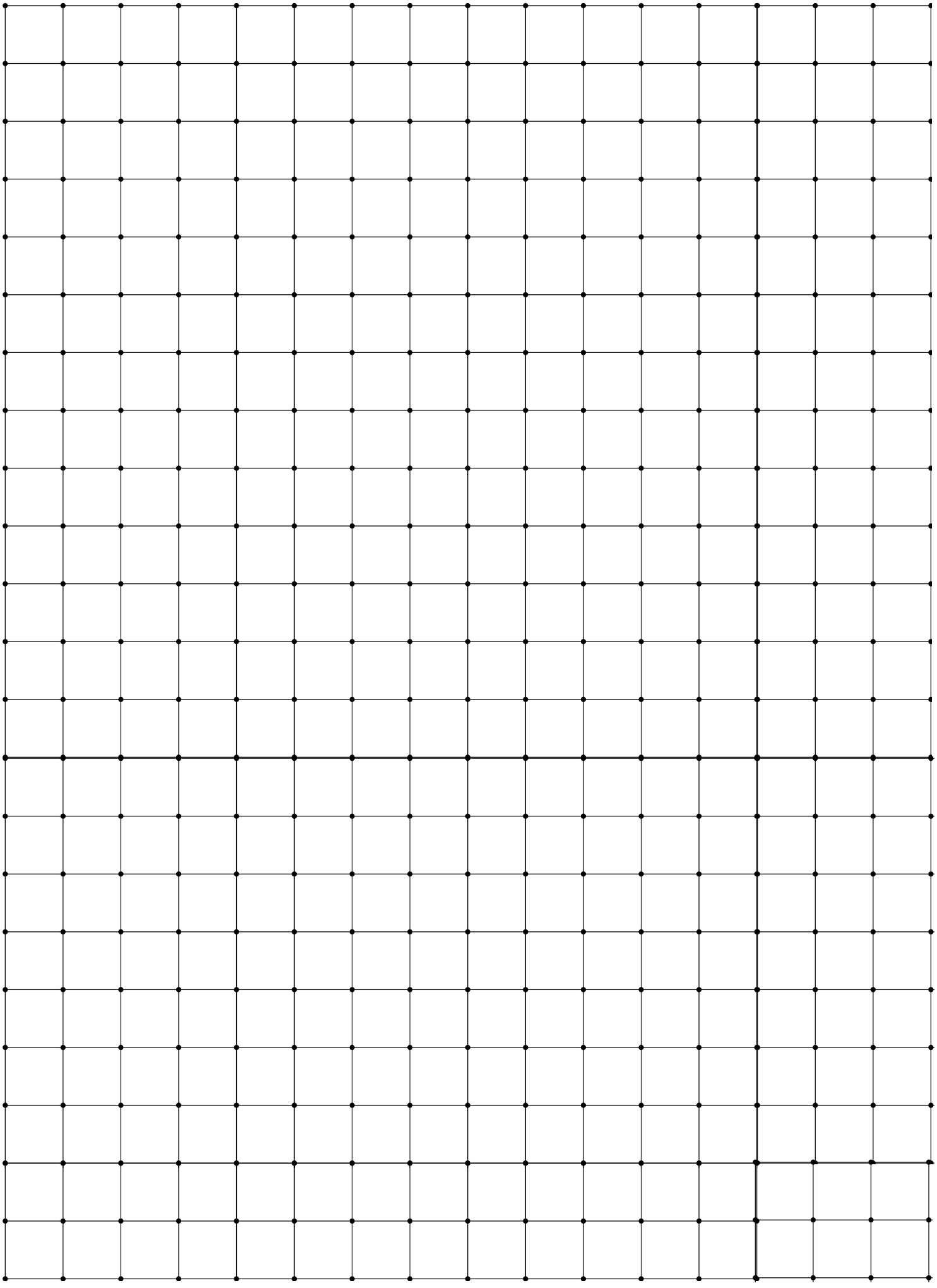
9.2) Use the graph paper on the next page and draw the following:

a) a quadrilateral with sides each of 5 units

b) A triangle with a base of 5 units and the other two sides both of 4 units.

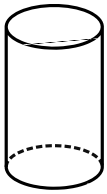
c) a rectangle with length 6 and width 3

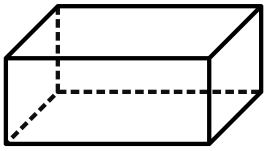
d) a trapezium with a base of 8 and an opposite side of 4, side of 3 each

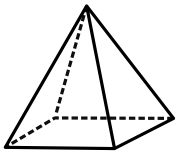


Question 10: 2D shape as basis of 3D shapes

10.1) Write the base of each 3D figure below.







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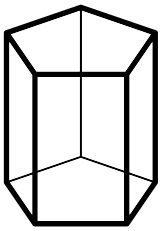
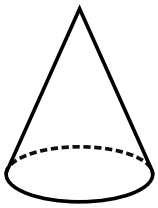
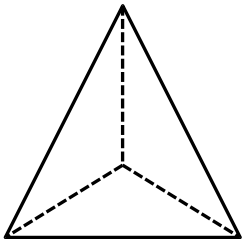
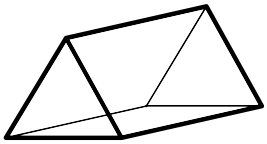


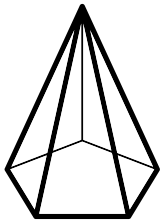


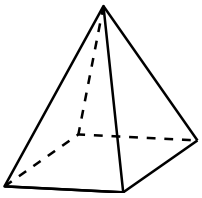


_____ _____ _____

10.2) Draw which 2D shapes will build the 3D figure.







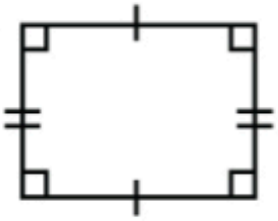
10.3) If you have 6 regular quadrilaterals, what 3D figure can you build with them?

_____

Question 11: Name each shape

1 

_____

2 

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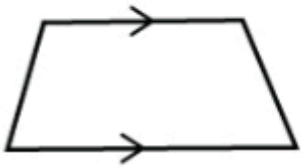
3 

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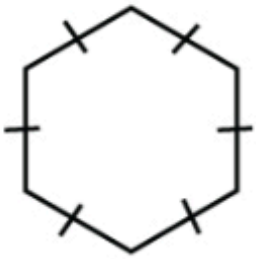
4 

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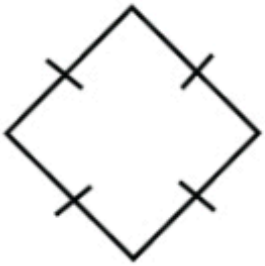
5 

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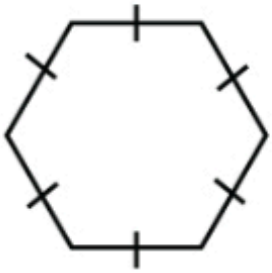
6 

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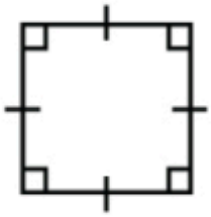
7 

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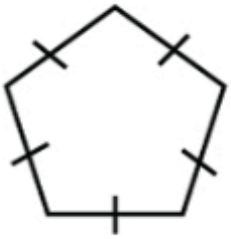
8 

_____

Question 12: Indicate how many vertices and straight sides each shape has.

	vertices	straight sides
2	_____	_____
3	_____	_____
4	_____	_____
1	_____	_____