

Date: _____

Chapter 5 : 2D and 3D shapes (5.A.1)

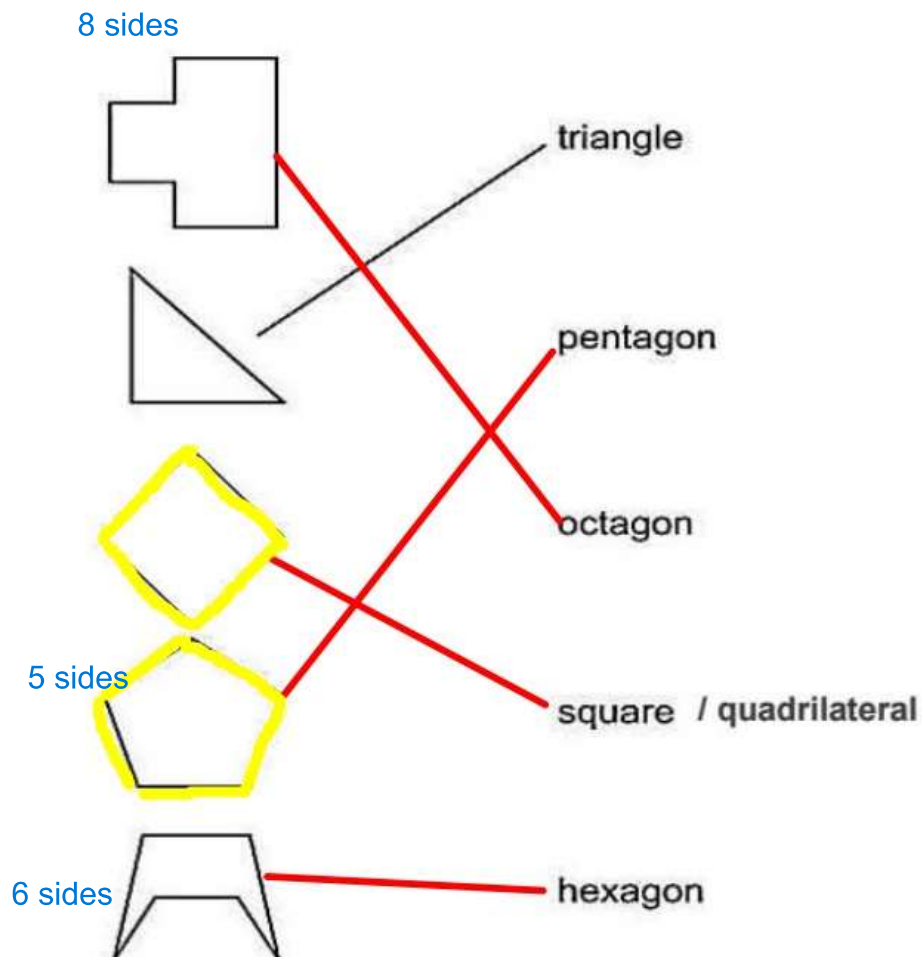
Q1. Look at the following 2D shapes.

all sides and angles are equal

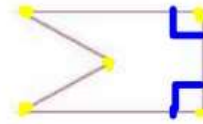
a) Trace the regular polygons.

b) Draw a line to join each shape to its name.

One has been done for you.



pentagon



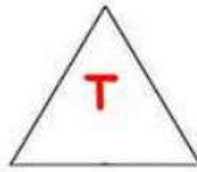
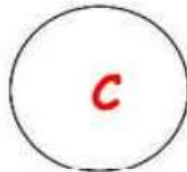
Q2. Here is a 2D shape. Complete the statements.

It has 5 vertices, 2 right angles and 5 sides.

5 angles (2 of them are right angles)

Q3. Here are some shapes.

hexagon



Answer the following questions. Write the **letter** of the shape.

a) Which shape is not a polygon? C (curved)

b) Which polygon has less than 4 sides? T

c) Which shape has 4 vertices? S

d) Which shape has more than 4 angles? H

Q4. Compare the shapes. Write ONE difference and ONE similarity.

regular polygon



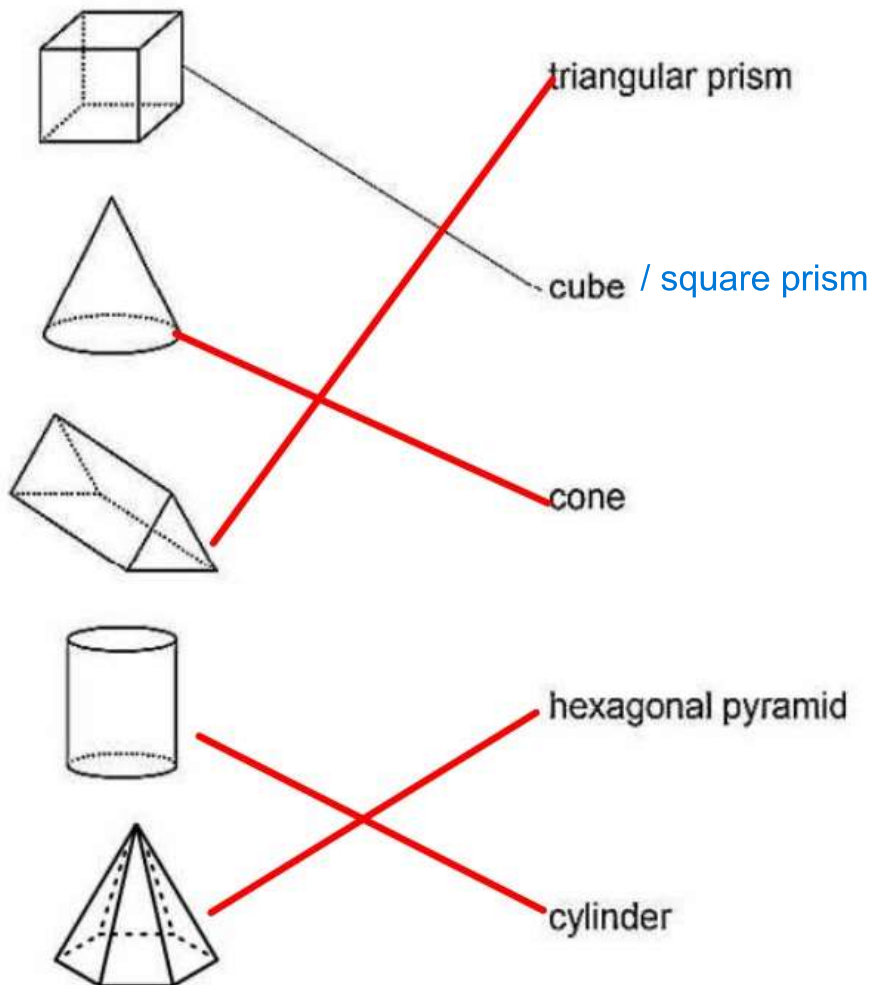
irregular polygon



difference : shape, length of sides, size of angles

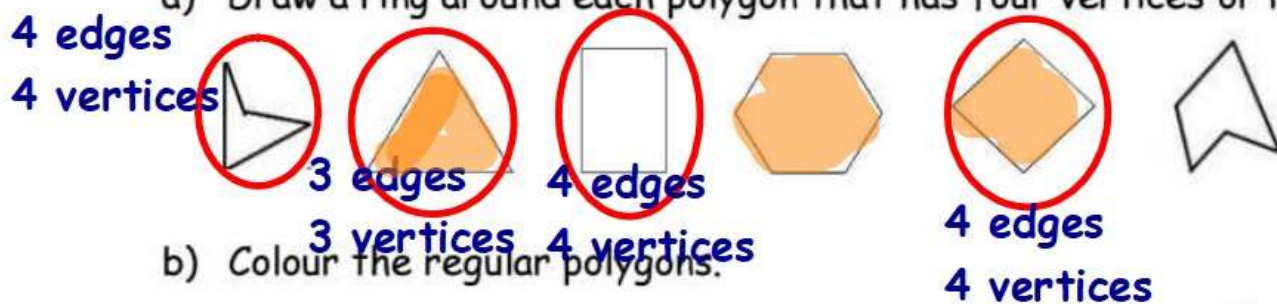
similarity : both are polygons , both are octagons

Q5. Draw a line to join each 3D shape to the correct name.



Q6. Look at the polygons below.

a) Draw a ring around each polygon that has four vertices or less.



b) Colour the regular polygons.

Q7. Here are three diagrams of solid shapes.

Choose the correct word from the list to complete each sentence.

faces

edges

prisms

pyramids

vertices

6 vertices

6 faces (1 pentagonal
and 5 triangular faces)

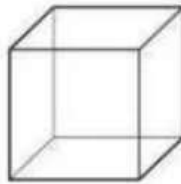
$5+1=6$ faces



A

8 vertices

6 square faces
 $4+2=6$ faces)



B

6 vertices

5 faces (2 triangular
3 rectangular faces)

$(3+2=5)$ faces)



C

pentagonal pyramid

cube

triangular prism

A and B both have the same number of faces.

A and C both have the same number of vertices.

B and C are both prisms.

Q8. Here are the names of four 2D shapes.

8 sides

octagon

3 sides

triangle

6 sides

hexagon

5 sides

pentagon

Write the shapes in order according to the number of sides.

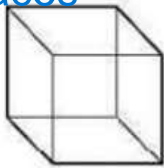
Start with the smallest number of sides.

triangle, pentagon, hexagon, octagon

smallest number
of sides

Q9. These pictures show four 3D shapes.

$4+2=6$ faces



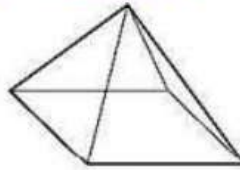
cube

12 edges
6 square faces
8 vertices



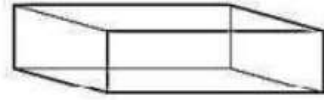
cylinder

5 vertices



square-based
pyramid

12 edges
6 rectangular
faces
8 vertices

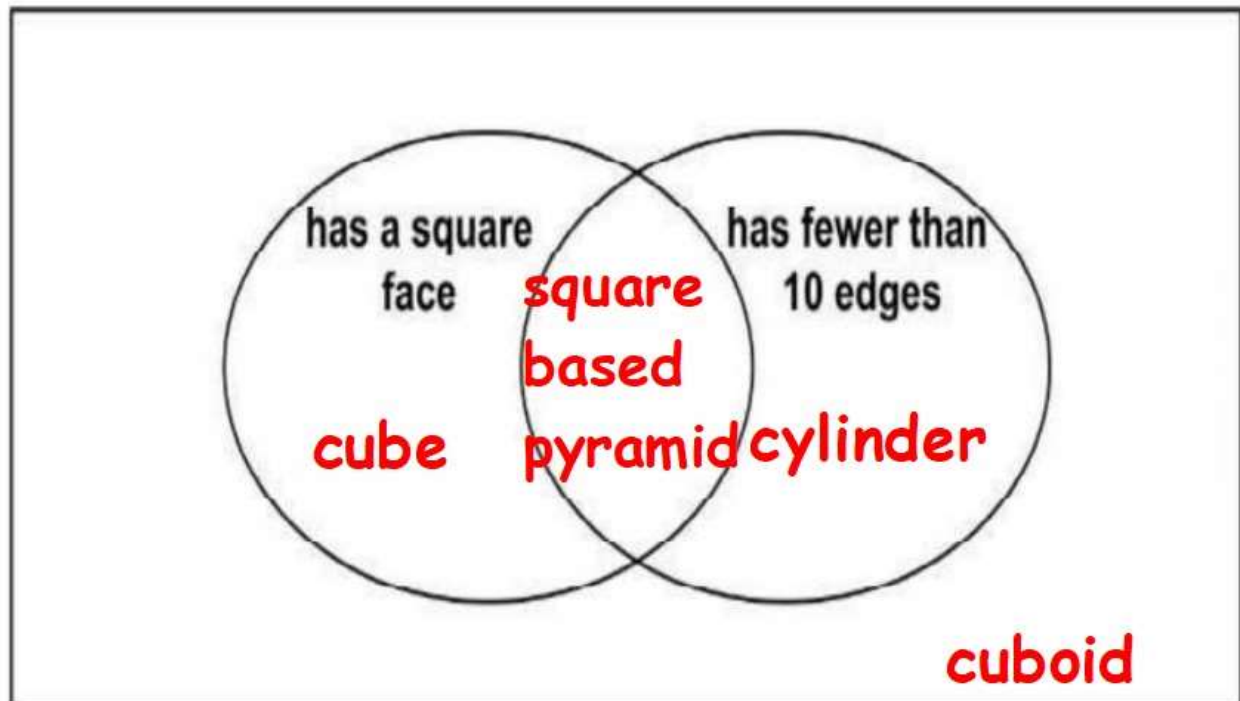


cuboid

$4+2=6$
faces

Complete the Venn diagram by writing the names of these shapes in the correct place.

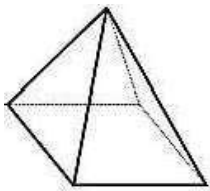
1 square + 4 triangular faces
so 5 faces altogether
and 8 edges
 $4+1=5$ faces



Q10. These pictures show five 3D shapes.

Write the letter of each shape in the correct place in the table.

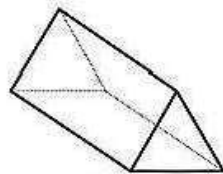
One has been done for you.



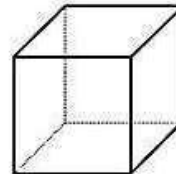
A



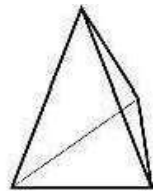
B



C



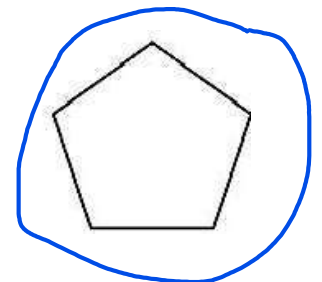
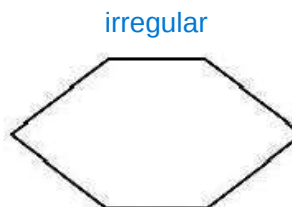
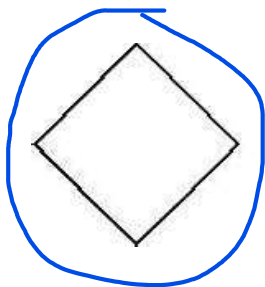
D



E

Has no triangular faces	Has at least one triangular face
D and B	A , C, E

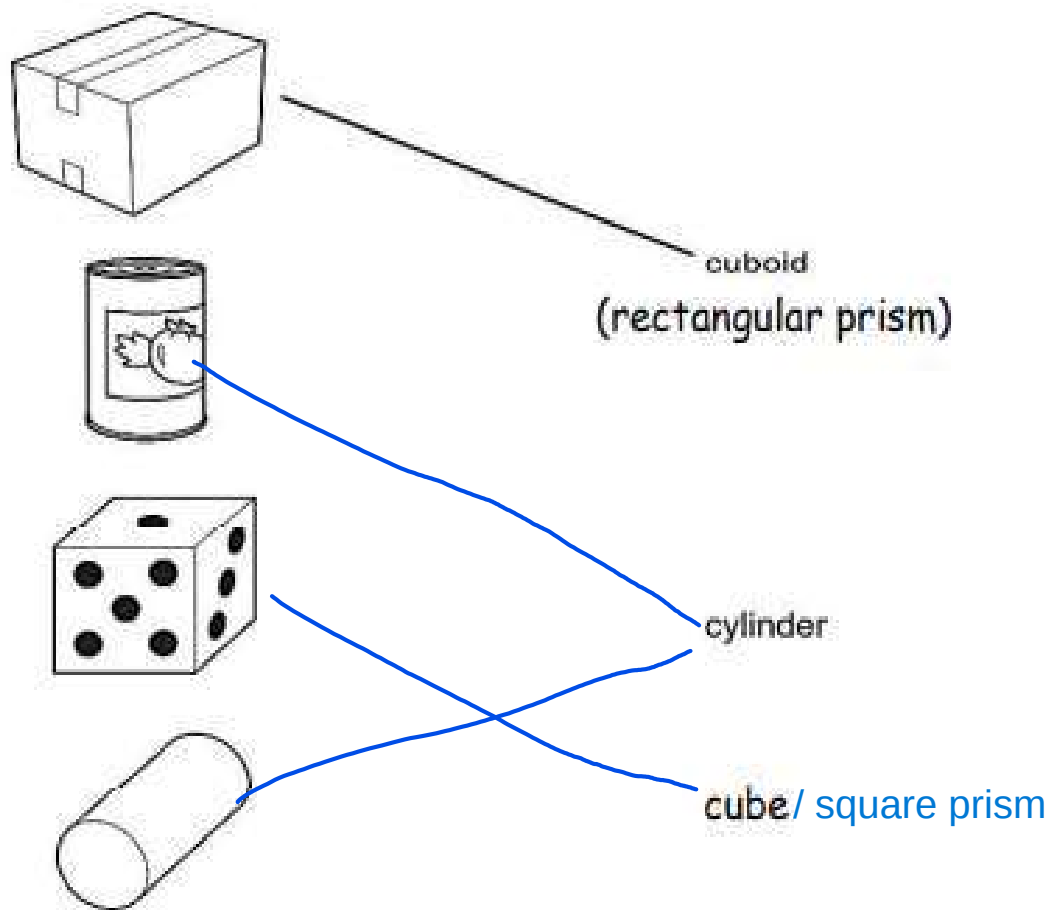
Q12. Draw a ring around each of the regular shapes.



How many polygons are there? 4 polygons

2D/flat
closed
straight edges

Q13. Draw a line to join each picture to the correct shape name.

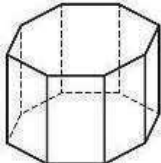
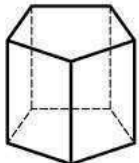
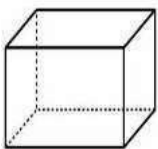
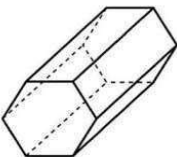
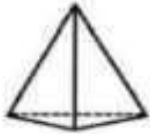
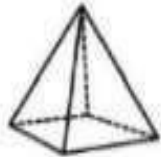


Q14. Katie describes a shape.

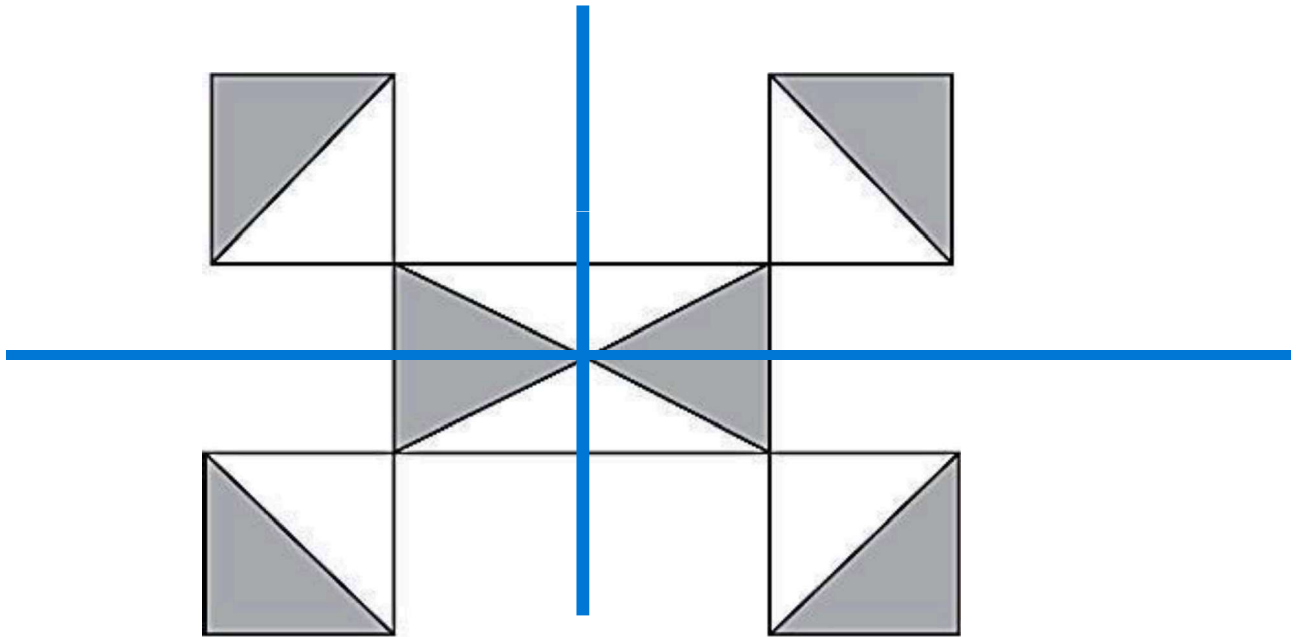
- It is a 3D shape.
- It has 6 vertices.
(2 identical bases)
- It has 2 triangular faces and 3 rectangular faces.

What shape is Katie describing? triangular prism

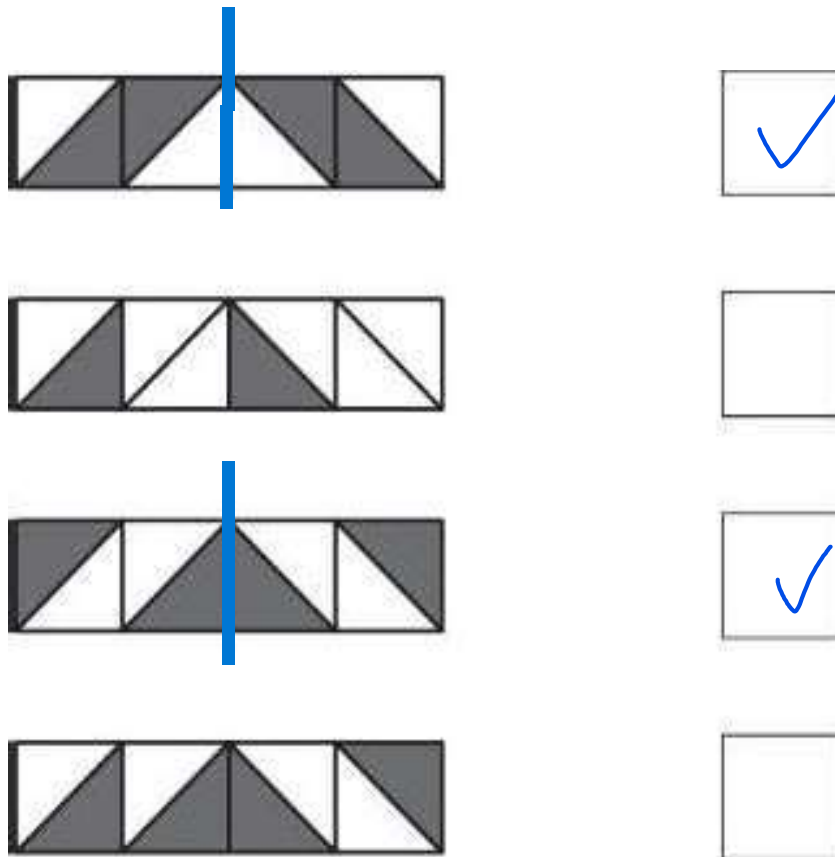
Q15. Fill in the blanks.

	name of 3D shape	type of faces (rectangular or triangular)	number of bases
	$8+2=10$ faces octagonal prism	<u>octagon bases</u> rectangular faces	<u>2</u>
	$5+2=7$ faces <u>pentagon prism</u>	<u>pentagon bases</u> rectangular faces	<u>2</u>
	$4+2=6$ faces <u>cube</u>	<u>square faces</u> 6 faces altogether	<u>2</u>
	$6+2=8$ faces hexagonal prism	<u>hexagon bases</u> rectangular faces	<u>2</u>
	$3+1=4$ faces triangular pyramid	<u>triangular faces</u> (and a triangular base)	<u>1</u>
	$4+1=5$ faces <u>square pyramid</u>	<u>triangular faces</u> square base	<u>1</u>
	$5+1=6$ faces <u>pentagonal pyramid</u>	<u>triangular faces</u> pentagon base	<u>1</u>

Q16. Draw all the lines of symmetry on this pattern.



Q17. Tick (✓) all the designs which have at least one line of symmetry.



Q18. Here are five shapes.

Write the number of lines of symmetry for each shape on the answer line below it.

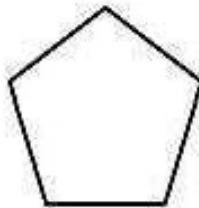
rectangle



2

.....

regular pentagon



5

.....

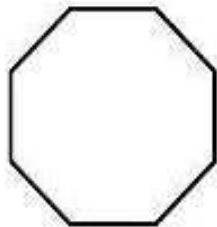
parallelogram



0

.....

regular octagon



8

.....

square



4

.....