

## Lesson 3 – Regular and Irregular Polygons

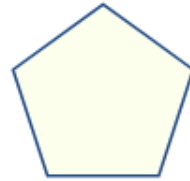
### Polygon

A **polygon** is a **plane** shape (two-dimensional) with straight sides. Examples include triangles, quadrilaterals, pentagons, hexagons and so on.

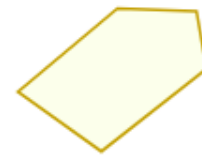
### Regular

A "Regular Polygon" has:

- all **sides** equal and
- all **angles** equal.



Regular Pentagon



Irregular Pentagon

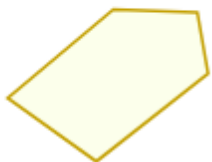
Otherwise it is **irregular**.

Here we look at **Regular Polygons** only.

Definition of

### Irregular Polygon

[more ...](#)



A polygon that does not have all sides equal and all angles equal.

(A polygon is "regular" only when all angles are equal and all sides are equal, otherwise it is irregular.)



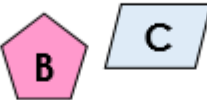

**Choose a sheet that you feel confident completing**

# \*1 STAR

## Regular and Irregular Polygons

## Regular and Irregular Polygons





1a. Has Omar sorted these shapes correctly? Explain your answer.

	Regular Polygon	Irregular Polygon
Has exactly 3 sides		
Not 4 sides		



R

1b. Has Abbie sorted these shapes correctly? Explain your answer.

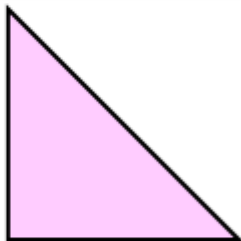
	Regular Polygon	Irregular Polygon
Has exactly 4 sides		
Not 4 sides		



R

2a. Jack says,

All triangles are regular polygons like the one below.



Is Jack correct? Explain your answer.



R

2b. Sunita says,

A rectangle is a regular polygon because it has 4 angles of equal size.

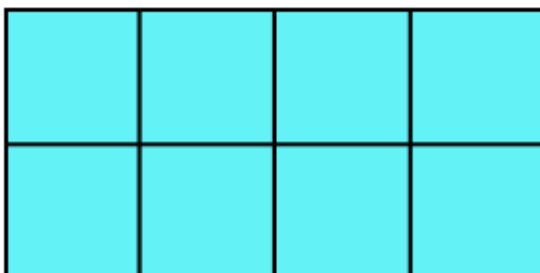


Is Sunita correct? Explain your answer.



R

3a. How many regular polygons can you see in this shape?








3b. How many regular polygons can you see in this shape?



## Regular and Irregular Polygons

4a. Has Shamir sorted these shapes correctly? Explain your answer.



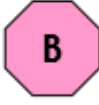



	Regular Polygon	Irregular Polygon
Has exactly 5 sides		
Not 5 sides	 	



R

## Regular and Irregular Polygons

4b. Has Malia sorted these shapes correctly? Explain your answer.

	Regular Polygon	Irregular Polygon
Has exactly 6 sides		
Not 6 sides	 	 



R

5a. Matty says,

My polygon is a regular hexagon because some of the sides are the same length and some of the angles are the same size.



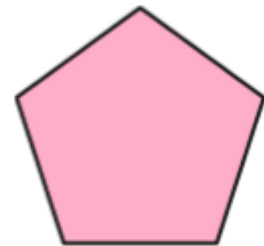
Is Matty correct? Explain your answer.



R

5b. Alexa says,

My regular pentagon has 5 angles that each measure  $120^\circ$ .

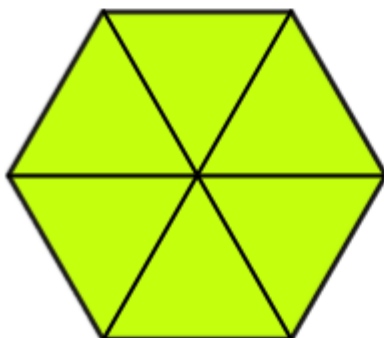


Is Alexa correct? Explain your answer.

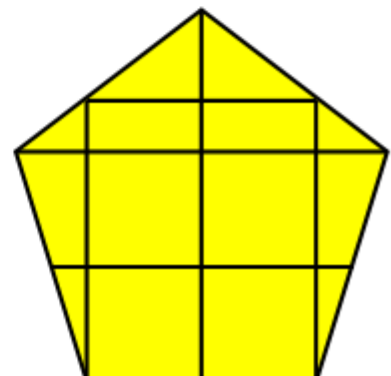


R

6a. How many regular polygons can you see in this shape?







6b. How many regular polygons can you see in this shape?



## Regular and Irregular Polygons

7a. Has Andy sorted these shapes correctly? Explain your answer.




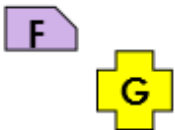
	Regular Polygon	Irregular Polygon
Has exactly 7 sides		
Not 7 sides		



R

## Regular and Irregular Polygons

7b. Has Kelly sorted these shapes correctly? Explain your answer.

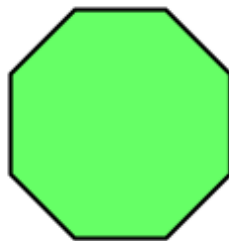
	Regular Polygon	Irregular Polygon
Has exactly 9 sides		
Not 9 sides		



R

8a. Nehal says,

My regular octagon has 8 angles that each measure  $180^\circ$ .



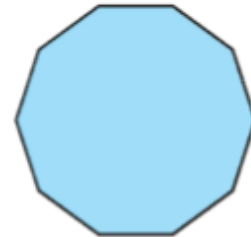
Is Nehal correct? Explain your answer.



R

8b. Martha says,

My regular decagon has 9 angles that each measure  $140^\circ$ .

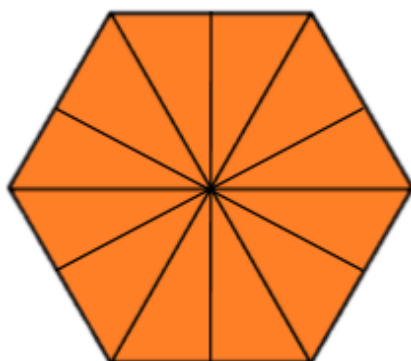


Is Martha correct? Explain your answer.



R

9a. How many regular polygons can you see in this shape?



9b. How many regular polygons can you see in this shape?

