

# **Ocean Maths Year 5**

## **Regular and Irregular Polygons**

**Discuss these statements about polygons.  
Are they true or false?**

True	False

**They have 5 or more sides**

**They are made up of  
straight lines**

**They are 2D shapes**

**They are a closed  
shape (no gaps)**

**They are 3D shapes**

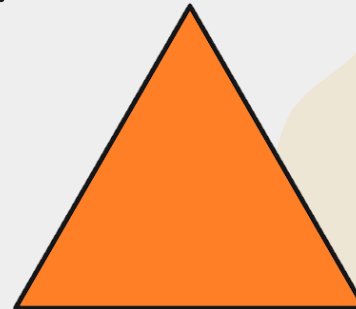
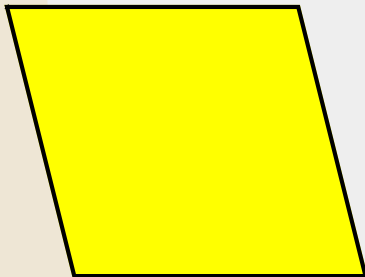
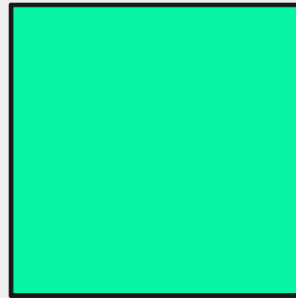
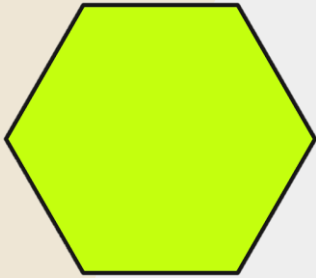
**They include open shapes**

**They can have curved  
sides**

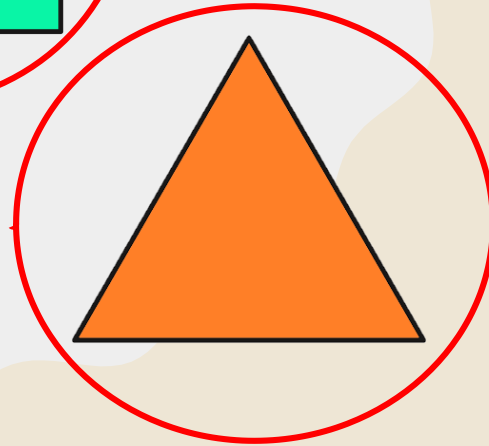
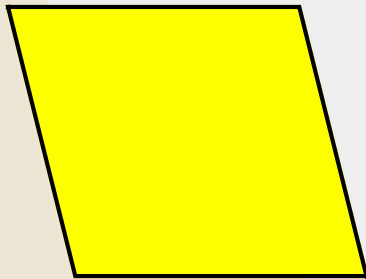
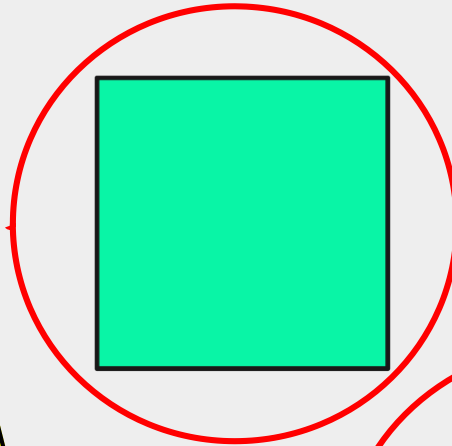
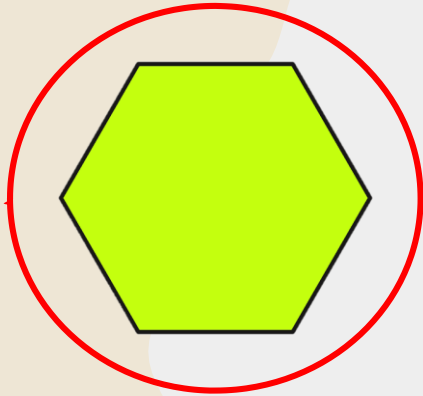
**Discuss these statements about polygons.  
Are they true or false?**

<b>True</b>	<b>False</b>
<p><b>They are a closed shape (no gaps)</b></p> <p><b>They are made up of straight lines</b></p> <p><b>They are 2D shapes</b></p>	<p><b>They are 3D shapes</b></p> <p><b>They include open shapes</b></p> <p><b>They can have curved sides</b></p> <p><b>They have 5 or more sides</b></p>

**Circle the regular polygons.**

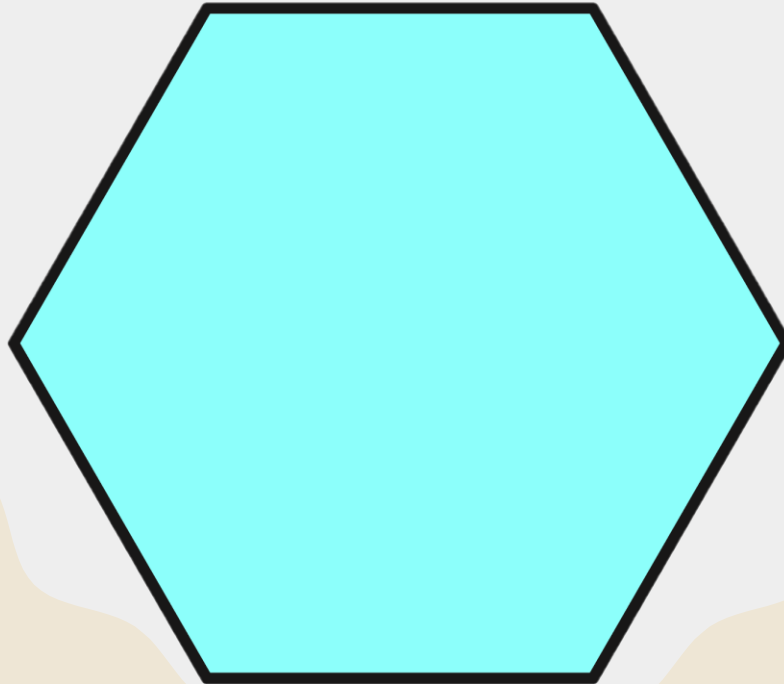


**Circle the regular polygons.**



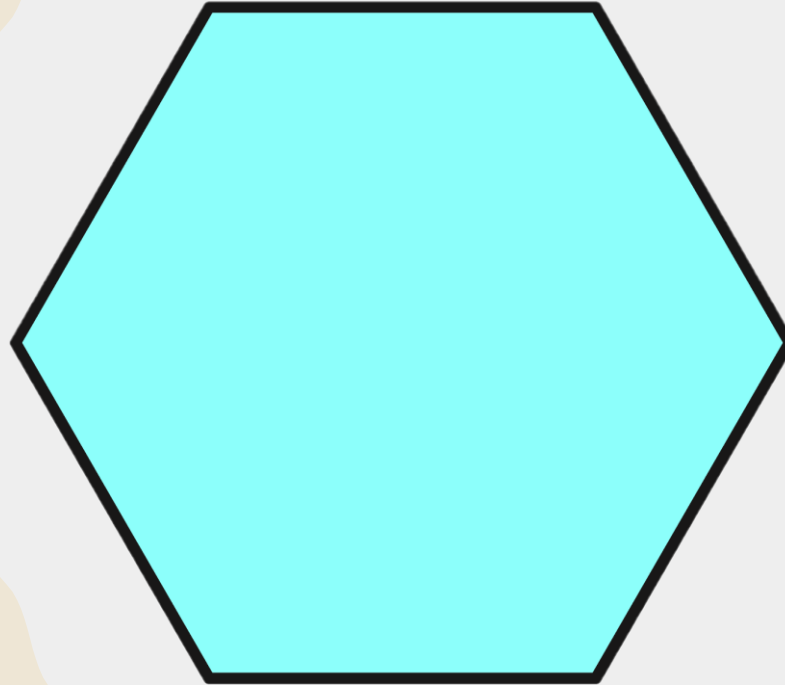
**Identify the name of this shape.**

**Use a ruler and a protractor to decide whether it is a regular or irregular polygon.**



**Identify the name of this shape.**

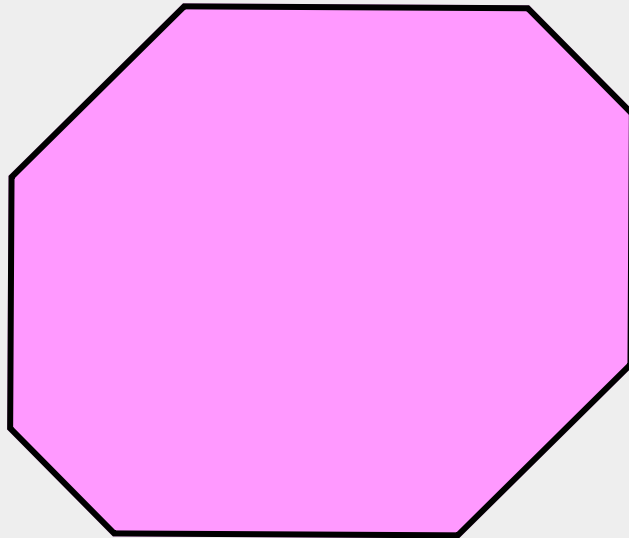
**Use a ruler and a protractor to decide whether it is a regular or irregular polygon.**



**This is a hexagon. It is a regular polygon.**

**This is a regular octagon.**

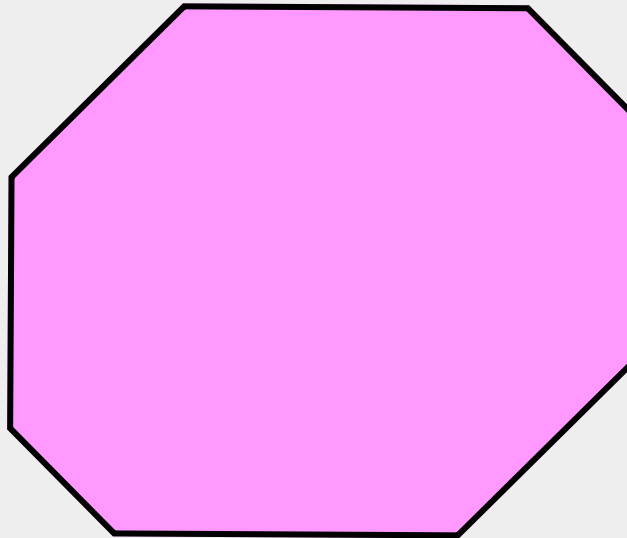
**True or false?**





**This is a regular octagon.**

**True or false?**



**False.**

**This is an irregular octagon as there are angles and sides of different lengths.**

**Draw a regular pentagon.**

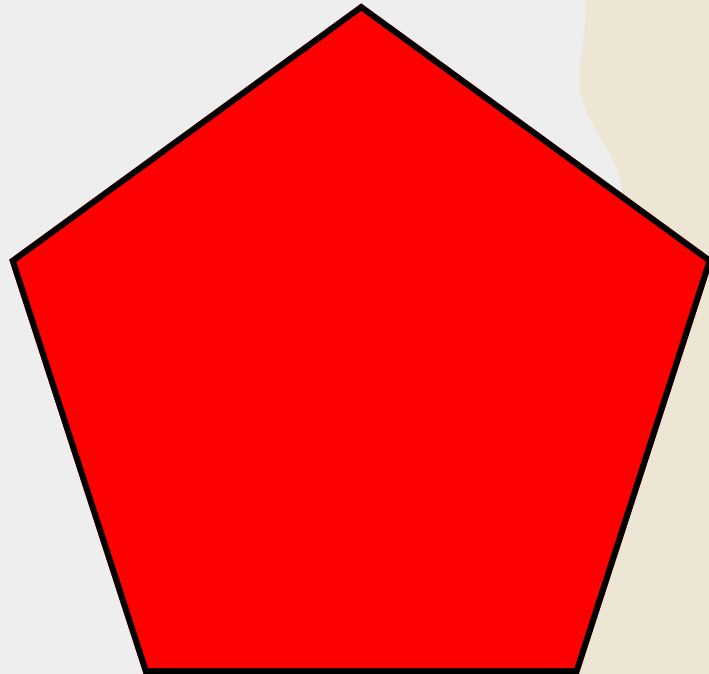
**Measure the length of each side and the size of each angle to make sure that they are equal.**

**Draw a regular pentagon.**

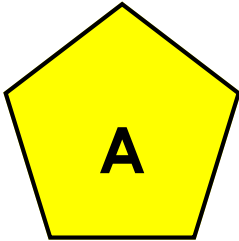
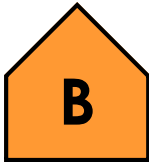
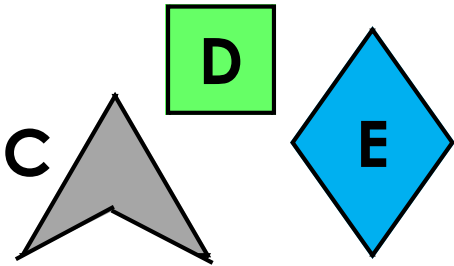
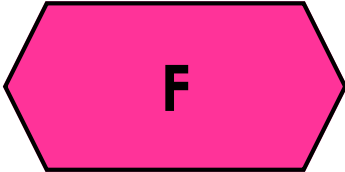
**Measure the length of each side and the size of each angle to make sure that they are equal.**

**You should have drawn a 5-sided shape.**

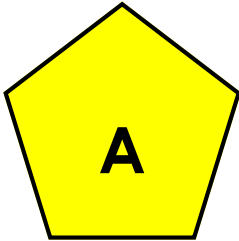
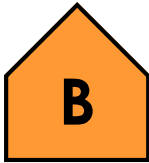
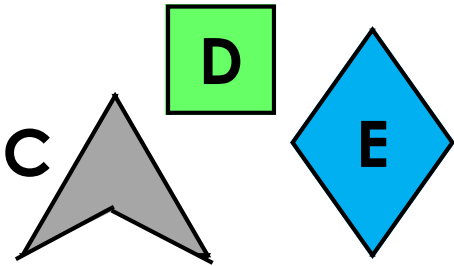
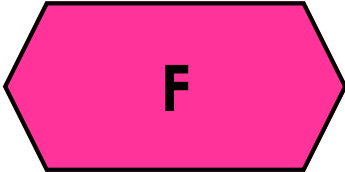
**The sides should all be the same length and all angles should measure  $108^\circ$ .**



Has Toni sorted these shapes correctly? Explain your answer.

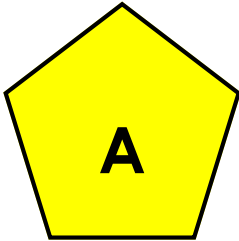
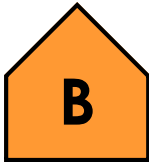
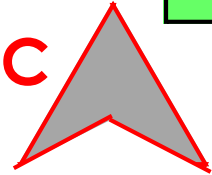

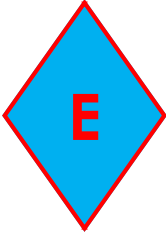
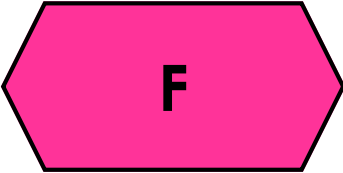
	Regular Polygon	Irregular Polygon
Has 5 sides		
Not 5 sides		

Has Toni sorted these shapes correctly? Explain your answer.

	Regular Polygon	Irregular Polygon
Has 5 sides		
Not 5 sides		

Toni has not sorted the polygons correctly because...

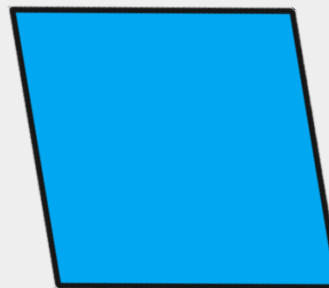
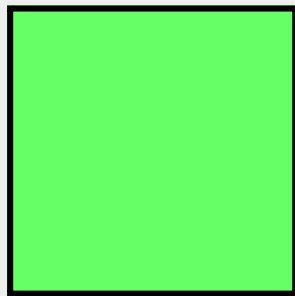
Has Toni sorted these shapes correctly? Explain your answer.

	Regular Polygon	Irregular Polygon
Has 5 sides		
Not 5 sides	  	

Toni has not sorted the polygons correctly because C and E are both irregular polygons as they have sides and angles of different sizes.

**Jade says:**

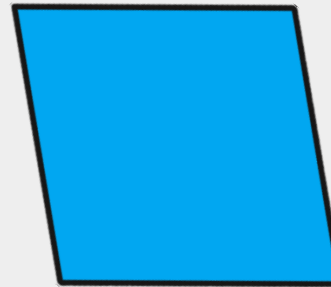
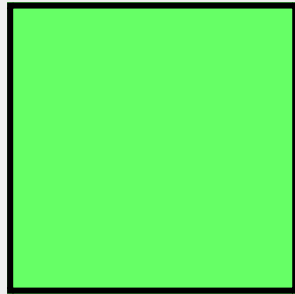
**A rhombus and a square are both regular polygons because they both have sides of equal length.**



**Is Jade correct? Explain your answer.**

**Jade says:**

**A rhombus and a square are both regular polygons because they both have sides of equal length.**



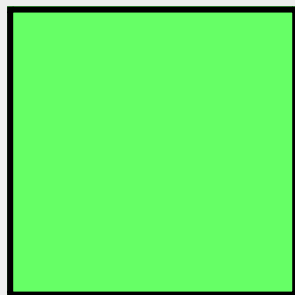
**Is Jade correct? Explain your answer.**

**Jade is incorrect...**



Jade says:

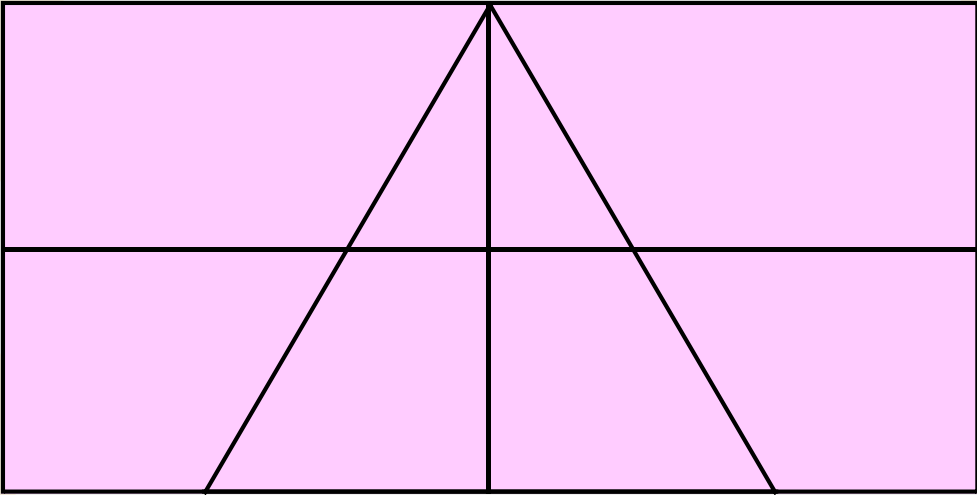
A rhombus and a square are both regular polygons because they both have sides of equal length.



Is Jade correct? Explain your answer.

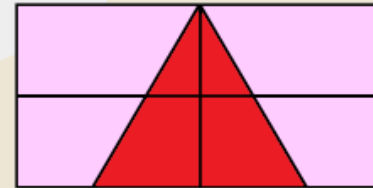
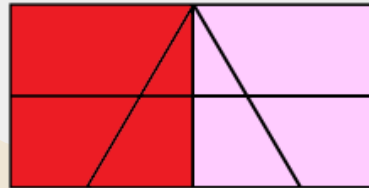
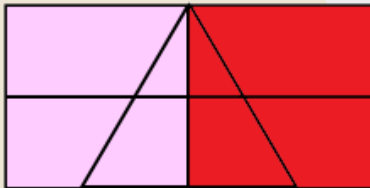
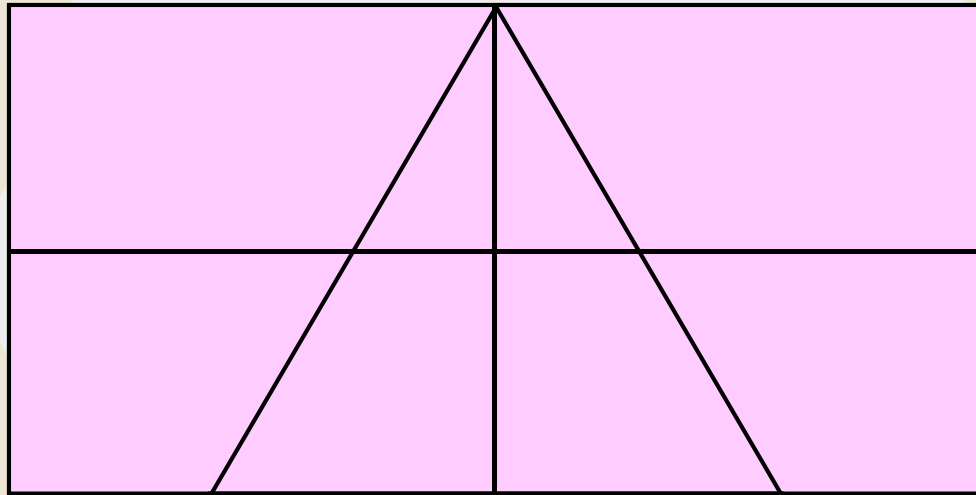
Jade is incorrect. A square is a regular polygon as it has sides of equal length and each angle measures  $90^\circ$ . However, a rhombus may have 4 sides of equal length, but it does not have 4 angles of equal size.

How many regular polygons can you see in this shape?



How many regular polygons can you see in this shape?

3 regular polygons (2 regular squares and 1 regular triangle).



Complete the quadrilaterals so that they have two right angles.

