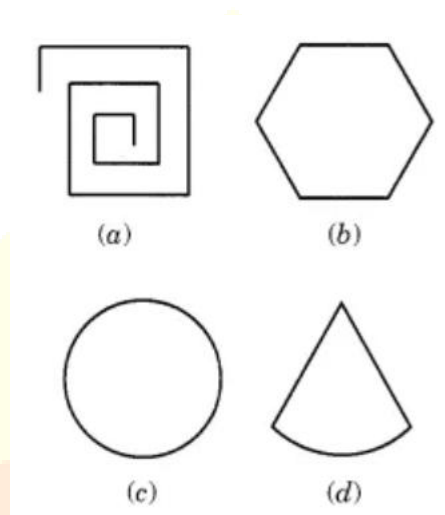


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Understanding Elementary Shapes**

**Exercise 5.8**

**Question 1:**

**Examine whether the following are polygons. If anyone among these is not, say why?**



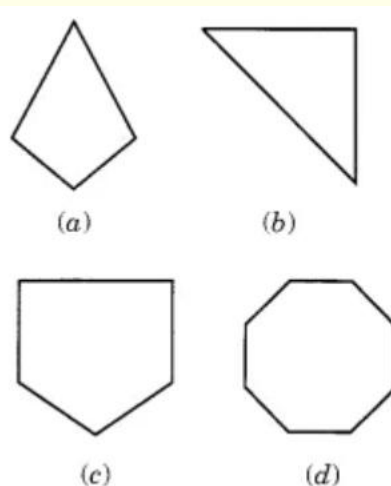
**Solution:**

The reasons are,

- (a) It is not a closed figure. So, it is not a polygon.
- (b) It is a polygon because it is closed by line segments.
- (c) Not made by line segments. Hence, not a polygon.
- (d) It is not a polygon because it not made only by line segments, it has curved surface also.

**Question 2:**

**Name each polygon:**



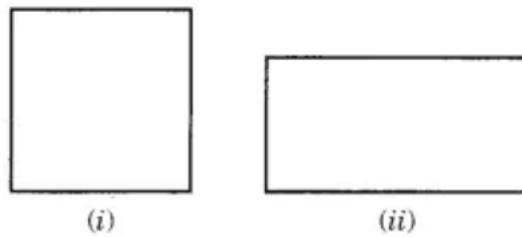
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Understanding Elementary Shapes**

**Make two more examples of each of these.**

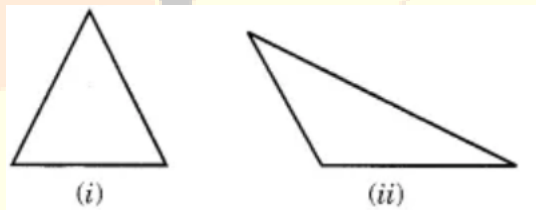
**Solution:**

The name of the polygons is,

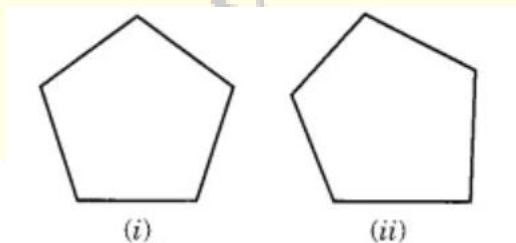
- (a) Quadrilateral  
Examples,



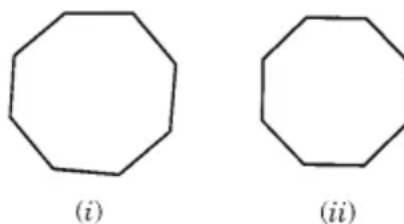
- (b) Triangle  
Examples,



- (c) Pentagon  
Examples,



- (d) Octagon  
Examples,



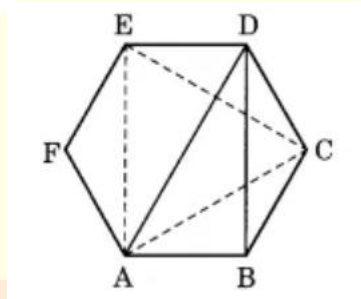
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Understanding Elementary Shapes**

**Question 3:**

**Draw a rough sketch of a regular hexagon. Connecting any three of its vertices, draw a triangle. Identify the type of the triangle you have drawn.**

**Solution:**

Let ABCDEF be a hexagon, now, if we join any three vertices, for example D, A, B, we get a scalene triangle DAB. But, if we join the alternate vertices, we get an equilateral triangle EAC.

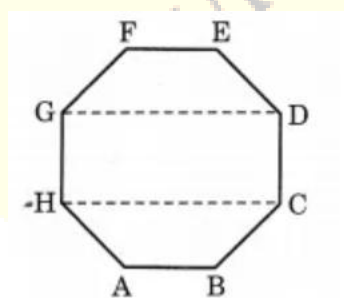


**Question 4:**

**Draw a rough sketch of a regular octagon. (Use squared paper if you wish). Draw a rectangle by joining exactly four of the vertices of the octagon.**

**Solution:**

This can be done in this way,



Here, ABCDEFGH is the octagon and after joining the vertices G with D and H with C, we will get the rectangle GHCD.

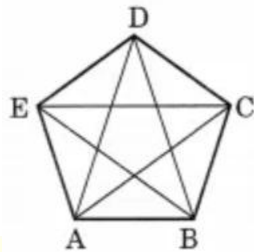
**Question 5:**

**A diagonal is a line segment that joins any two vertices of the polygon and is not a side of the polygon. Draw a rough sketch of a pentagon and draw its diagonals.**

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Understanding Elementary Shapes

**Solution:**

Let ABCDE be the pentagon and we will join its vertices,



DB, DA, EB, EC, AC are the diagonals of the pentagon.

