Question 1.

State whether the following statements are true (T) or false (F):

(i) Each angle of a rectangle is a right angle.

(ii) The opposite sides of a rectangle are equal in length.

(iii) The diagonals of a square are perpendicular to one another.

(iv) All sides of a rhombus are equal in length.

(v) All sides of a parallelogram are equal in length.

(vi) The opposite sides of a trapezium are parallel.

(vii) The diagonal of a parallelogram are equal.

Solution:

(i) True

(ii) True

(iii) True

(iv) False

(v) False

(vi) False

(vii) False

Question 2.

Examine whether the following figures are polygons. Give reasons.
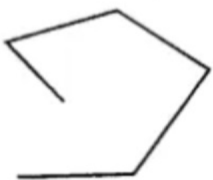
(i)   (ii)   (iii)   (iv)
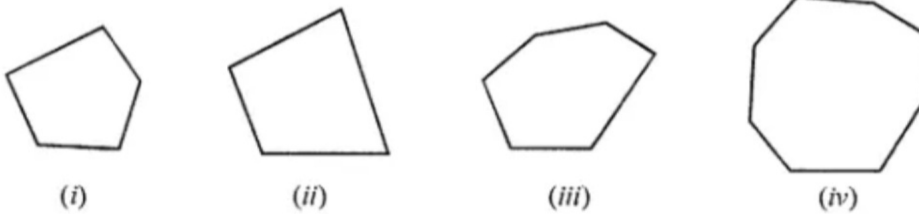
Solution:

(i) Not a polygon, because it is not a closed curve.

(ii) Polygon, because it is a simple closed curve made up entirely of line segments.

(iii) Not a polygon, because it is not a simple curve.

(iv) Not a polygon, because it is not made up of entirely line segments.
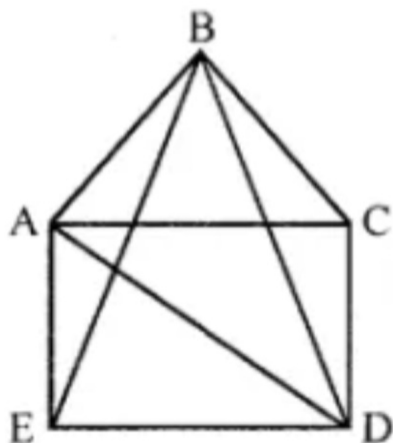
Question 3.

Name each of the following polygons:

(i)　　　　(ii)　　　　(iii)　　　　(iv)

Solution:

(i) Pentagon

(ii) Quadrilateral

(iii) Hexagon

(iv) Octagon

Question 4.

Draw a rough sketch of a pentagon and draw its diagonals.

Solution:

ABCDE is required pentagon.

Its diagonals are : AC, AD , BE, BD.

Question 5.

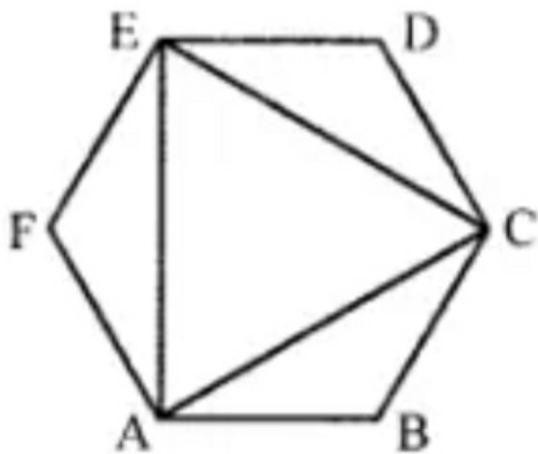Draw a rough sketch of a regular hexagon.

Connecting three of its vertices draw:

(i) an isosceles triangle

(ii) a light angled triangle.

Solution:

The triangle ACE obtained on joining its three vertices A, C and E is an equilateral triangle.

Question 6.

Can you identify the regular quadrilateral?

Solution:

Square is regular quadrilateral.