Chapter 16: Quadrilaterals

PRACTICE SET 37 [PAGE 85]

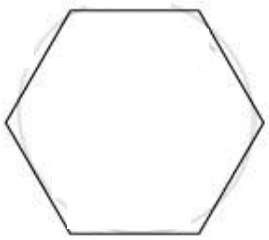
Practice Set 37 | Q 1 | Page 85
Observe the figure below and find out their name.

SOLUTION

In the given figure, there are five sides.

Hence, the given figure is a Pentagon.

Practice Set 37 | Q 2 | Page 85
Observe the figure below and find out their name.



SOLUTION

In the given figure, there are six sides.

Hence, the given figure is Hexagon.

Practice Set 37 | Q 3 | Page 85
Observe the figure below and find out their name.

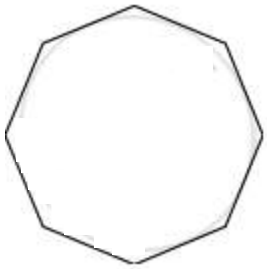
SOLUTION

In the given figure, there are seven sides.

Hence, the given figure is Heptagon.

Practice Set 37 | Q 4 | Page 85

Observe the figure below and find out their name.



SOLUTION

In the given figure, there are eight sides.

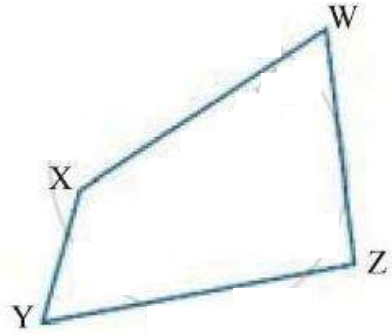
Hence, the given figure is Octagon.

PRACTICE SET 38 [PAGES 85 - 86]

Practice Set 38 | Q 1.1 | Page 85

Draw □XYZW and name the following:
The pairs of opposite angles.

SOLUTION

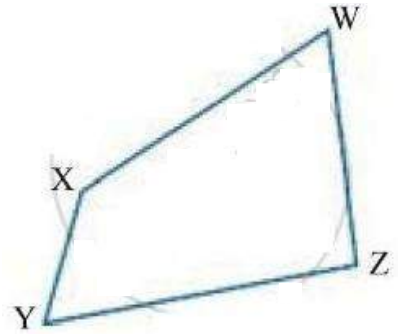


∠X and ∠Z; ∠Y and ∠W

Practice Set 38 | Q 1.2 | Page 85

Draw □XYZW and name the following:
The pairs of opposite sides.

SOLUTION

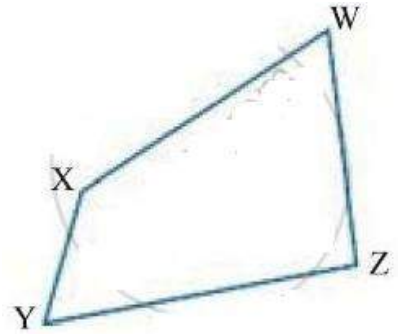


seg XY and seg ZW; seg XW and seg YZ

Practice Set 38 | Q 1.3 | Page 85

Draw □ XYZW and name the following:
The pairs of adjacent sides.

SOLUTION

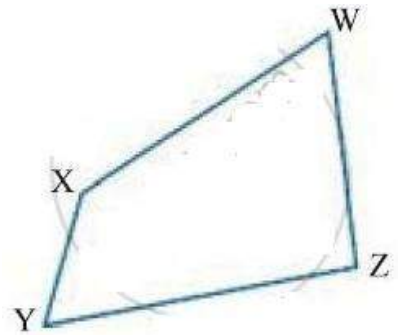


seg XY and seg YZ; seg YZ and seg WZ; seg WZ and seg XW; seg XW and seg XY

Practice Set 38 | Q 1.4 | Page 85

Draw □ XYZW and name the following:
The pairs of adjacent angles.

SOLUTION

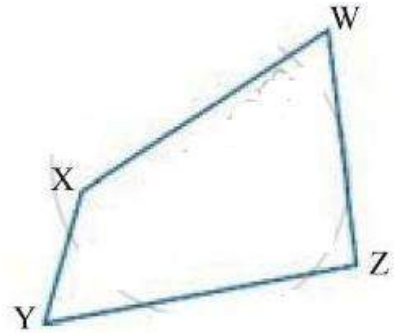


∠X and ∠Y; ∠Y and ∠Z; ∠Z and ∠W; ∠X and ∠W

Practice Set 38 | Q 1.5 | Page 85

Draw □ XYZW and name the following:
The diagonals of the quadrilateral.

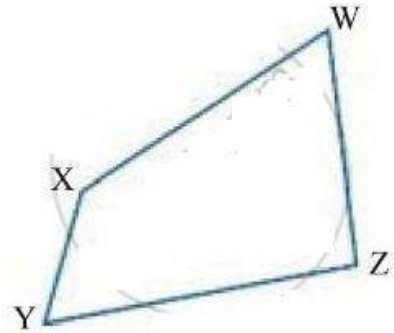
SOLUTION



Diagonal XZ and Diagonal YW

Practice Set 38 | Q 1.6 | Page 85
Draw □ XYZW and name the following:
The name of the quadrilateral in different ways.

SOLUTION



□YZWX, □ZWXY, □XYZW, □XWZY, □WZYX, □WXYZ etc.

Practice Set 38 | Q 2 | Page 86
In the table below, write the number of sides the polygon has.

Names	Quadrilateral	Octagon	Pentagon	Heptagon	Hexagon
Number of sides					

SOLUTION

Names	Quadrilateral	Octagon	Pentagon	Heptagon	Hexagon
Number of sides	4	8	5	7	6

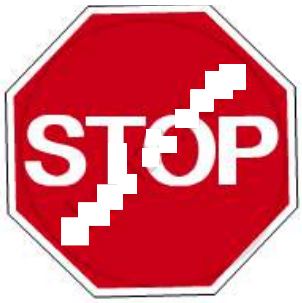
Practice Set 38 | Q 3 | Page 86
Look for examples of polygons in your surroundings. Draw them.

SOLUTION

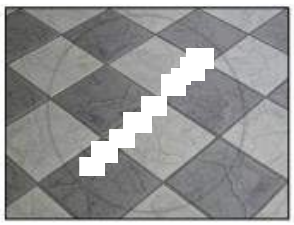
(a) The pattern of football is pentagonal in shape.

(b) Tablet box is heptagonal in shape

(c) Stop sign of traffic signal is in octagonal in shape



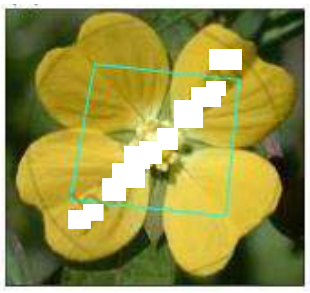
(d) Floor tiles are square in shape



Practice Set 38 | Q 4 | Page 86
We see polygons when we join the tips of the petals of various flowers. Draw these polygons and write down the number of sides of each polygon.

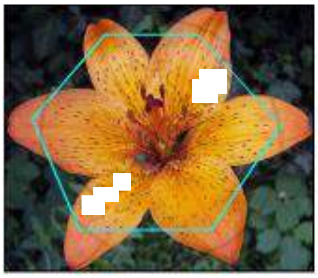
SOLUTION

(a)



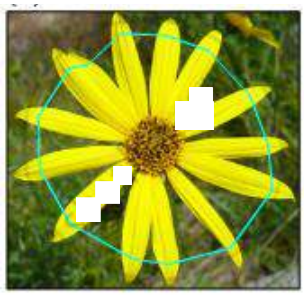
Number of Sides = 4

(b)



Number of Sides = 6

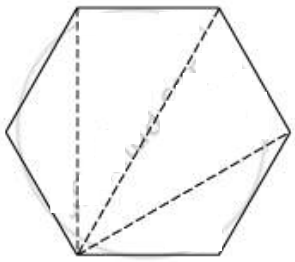
(c)



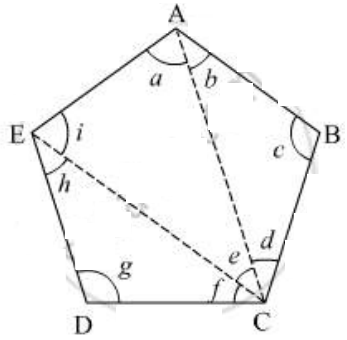
Number of Sides = 14

Practice Set 38 | Q 5 | Page 86

Draw any polygon and divide it into triangular parts as shown here. Thus work out the sum of the measures of the angles of the polygon.



SOLUTION



As the sum of the angle of a triangle is 180∘.

Therefore, h + g + f = 180∘ ...(1)

i + e + a = 180∘ ...(2)

b + c + d = 180∘ ...(3)

Add (1), (2) and (3)

h + g + f + i + e + a + b + c + d = 180∘ + 180∘ + 180∘

⇒ h + i + g + f + e + d + b + c = 540∘

⇒ E + D + C + B + A = 540∘

Therefore, the sum of the angles of a pentagon is 540∘