



MATHS

BOOKS - SWAN PUBLICATION

BASIC GEOMETRICAL CONCEPTS

Exercise 8 1

1. Give the examples of :

A point



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2. Give the examples of :

A line segment



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3. Give the examples of :

Parallel lines



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4. Give the examples of :

Intersecting lines



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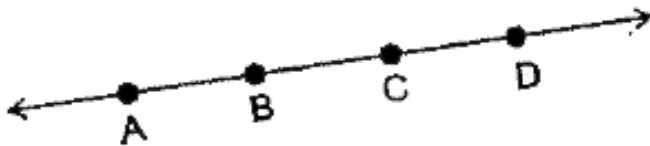
5. Give the examples of :

Concurrent lines



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6. Name the line segments in given line.



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7. How many lines can pass through a given point?



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8. How many points lie on a line ?



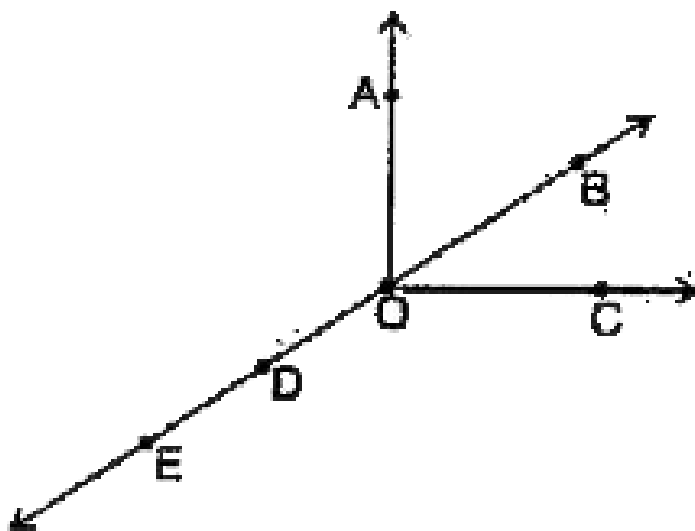
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9. How many lines can pass through
two given points?



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10. Use the figure to name.

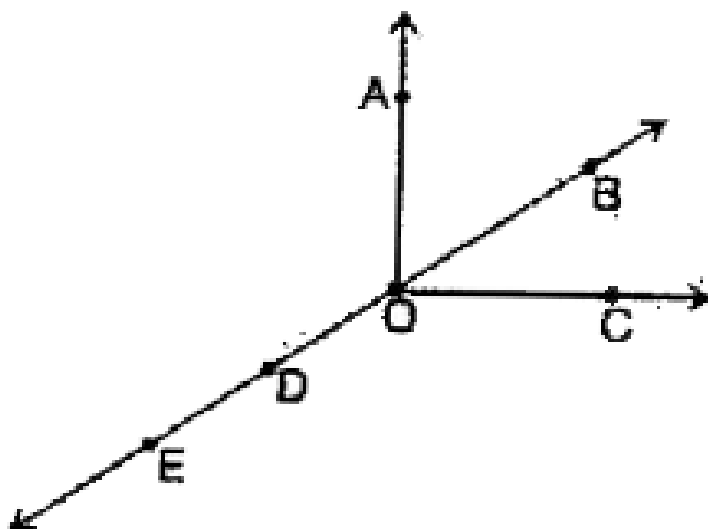


Five points



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11. Use the figure to name.

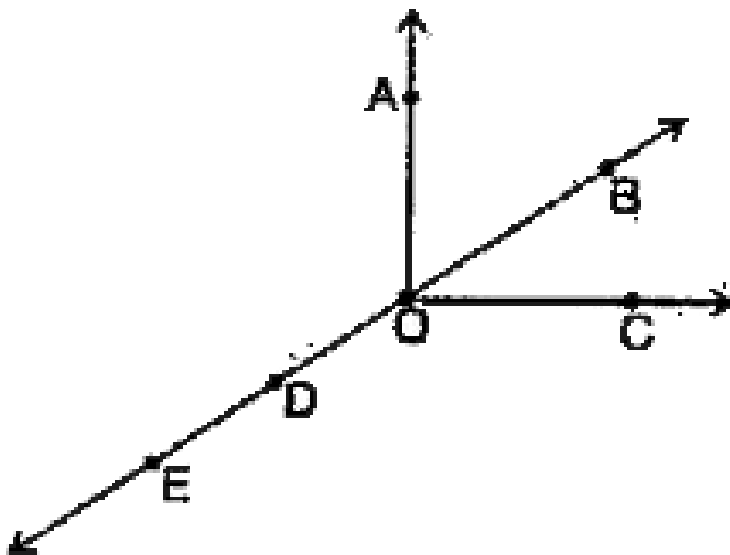


A line



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12. Use the figure to name.

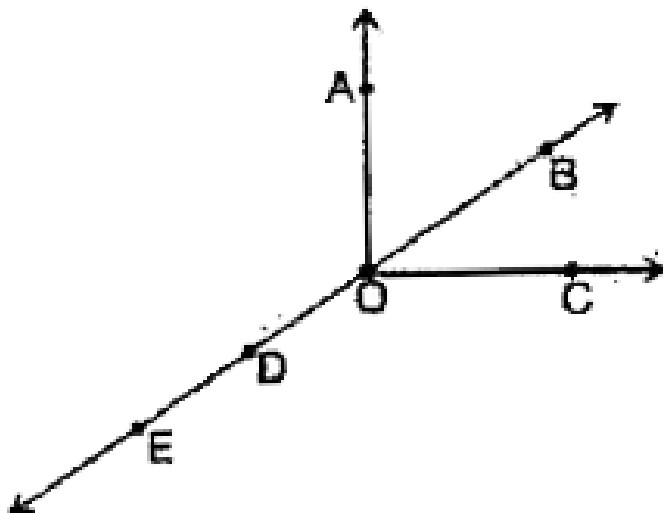


Four rays



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13. Use the figure to name.

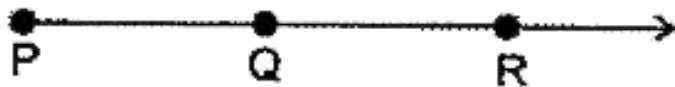


Five line segments



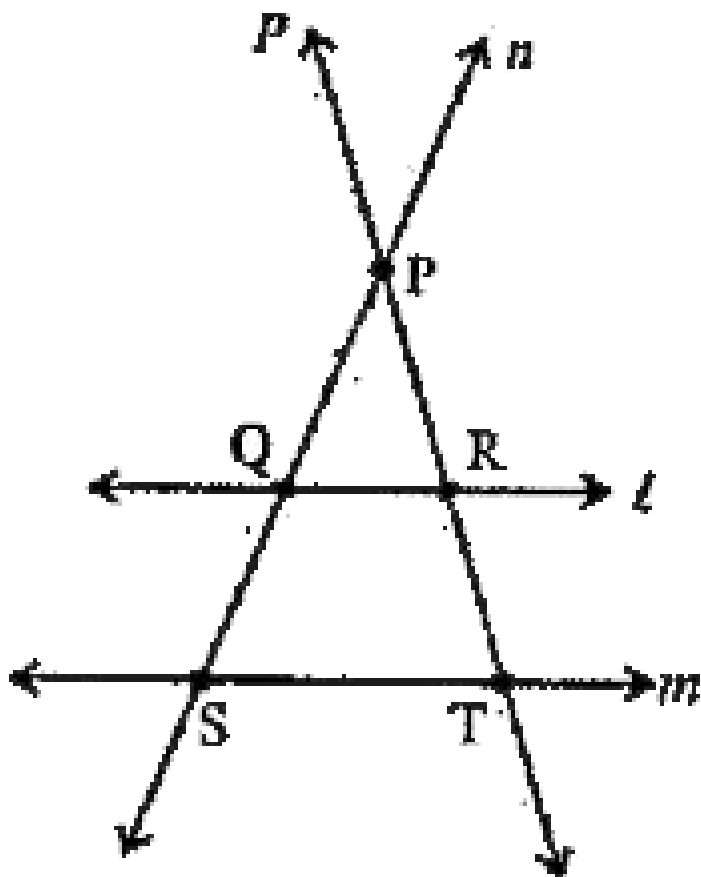
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14. Name the given ray in all possible ways.



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15. Use the figure to name :

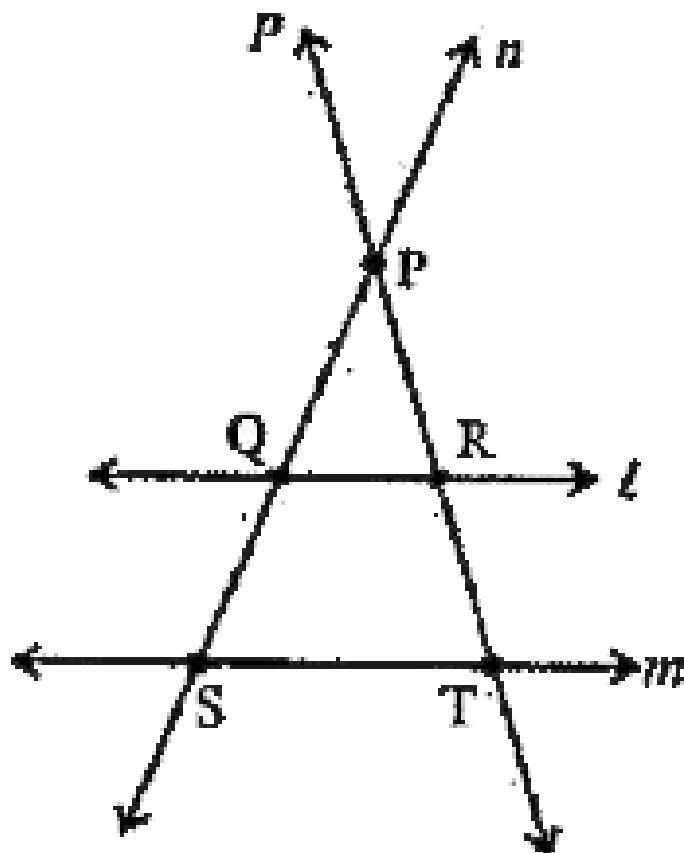


Pair of parallel lines.



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16. Use the figure to name :

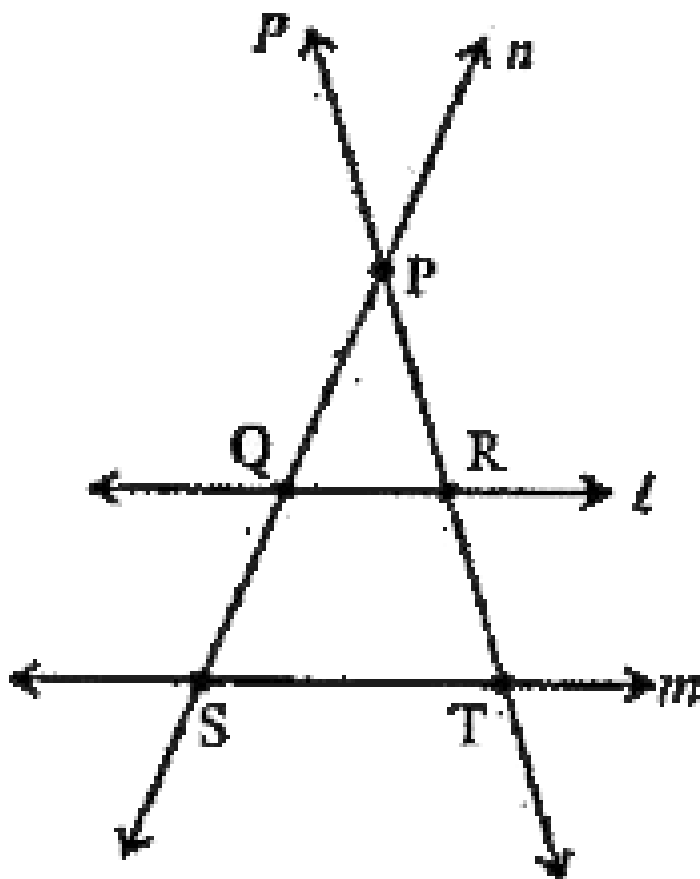


All pairs of intersecting lines.



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17. Use the figure to name :

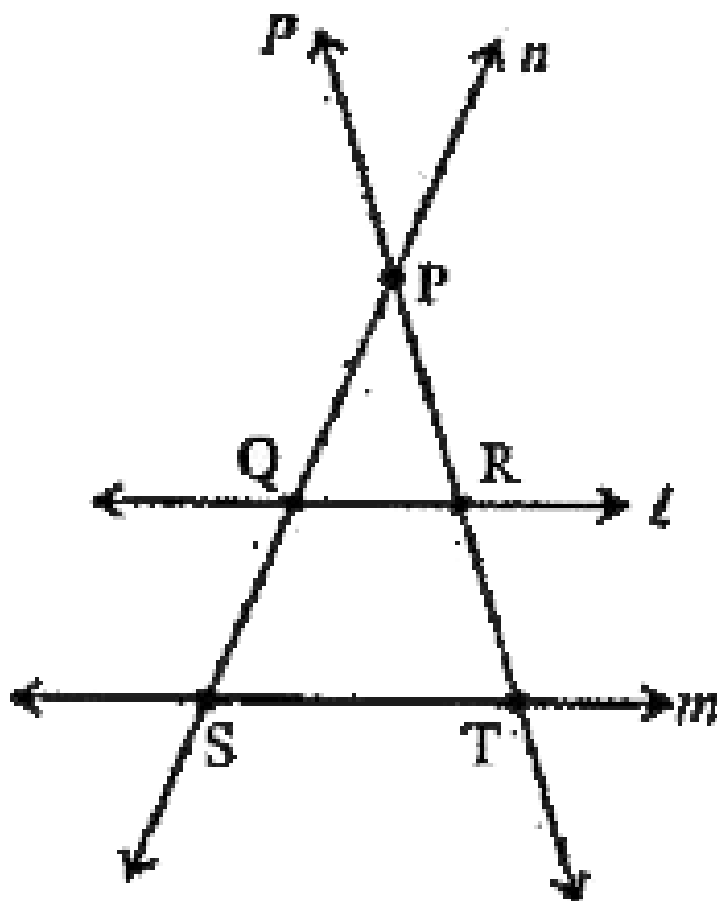


Lines whose point of intersection is S.



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18. Use the figure to name :

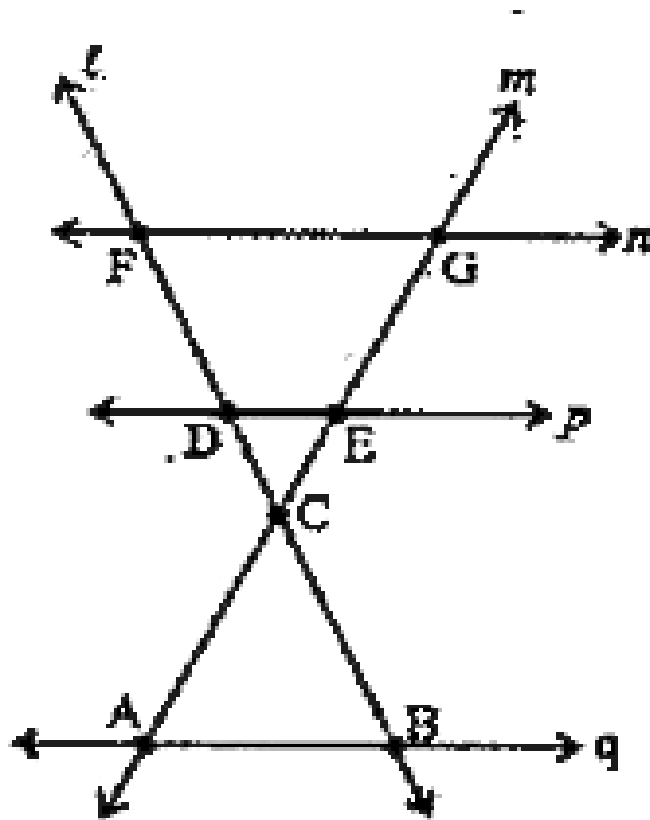


Collinear points.



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19. Use the figure to name :

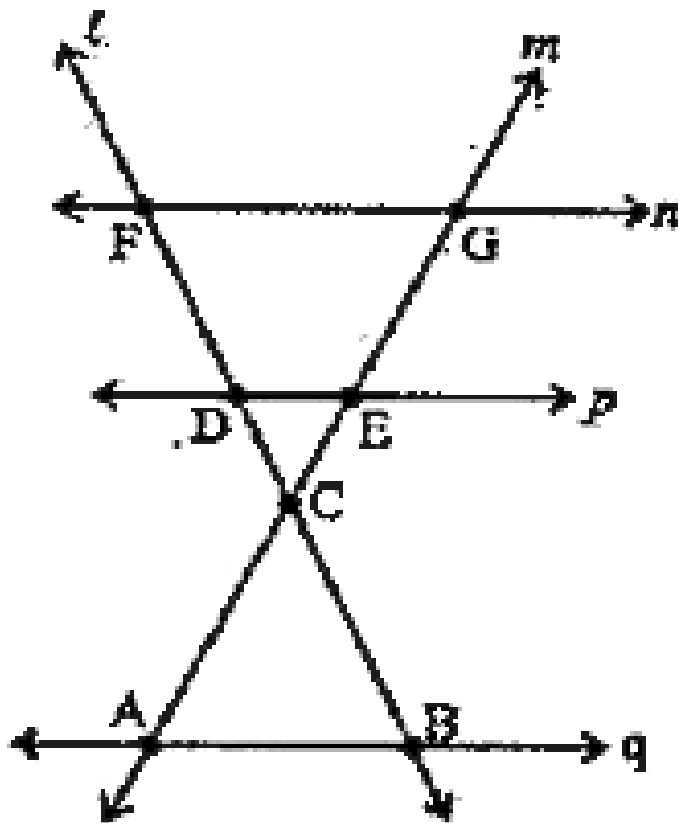


All pairs of parallel lines.



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20. Use the figure to name :

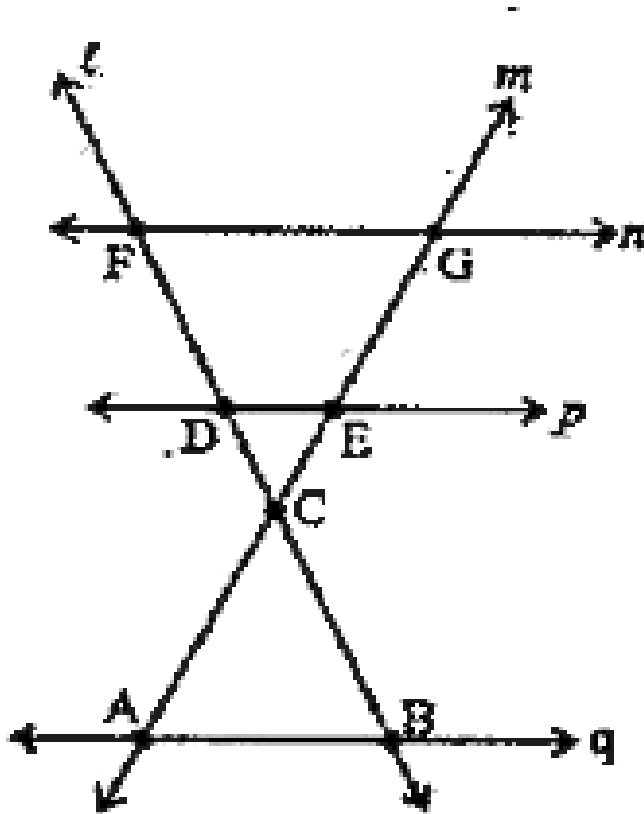


All pairs of intersecting lines.



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21. Use the figure to name :

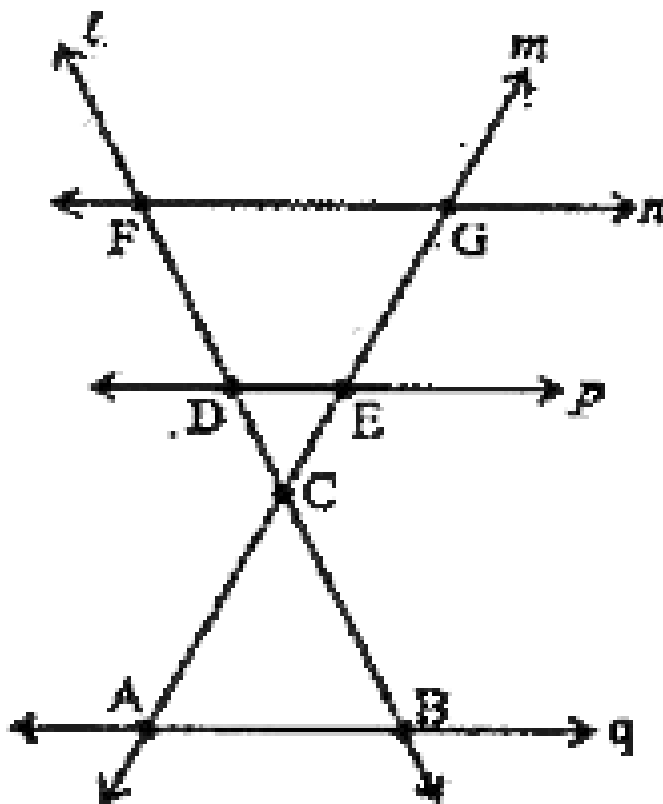


Lines whose point of intersection is D.



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22. Use the figure to name :

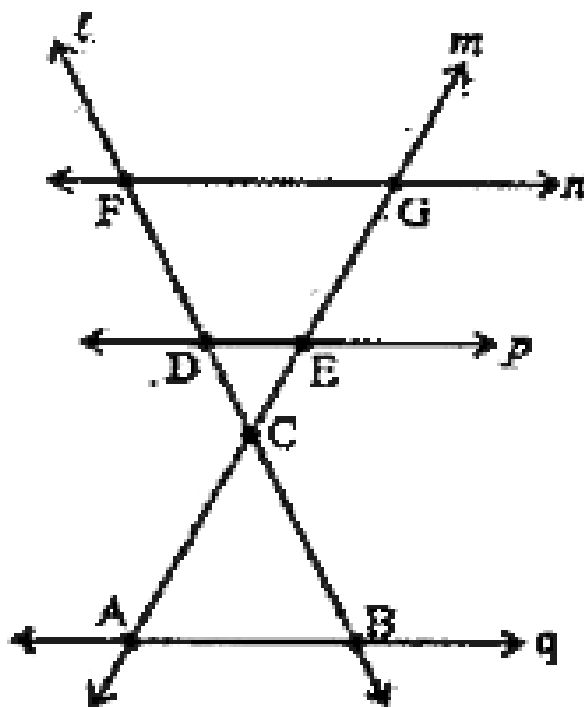


Point of intersection of lines m and p .



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23. Use the figure to name :

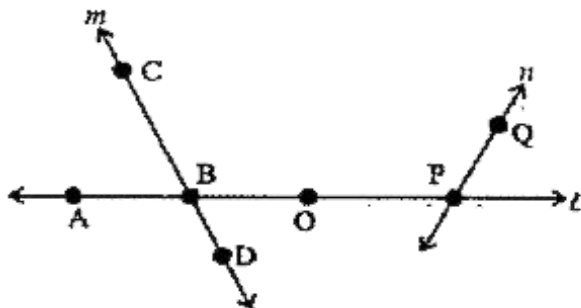


All sets of collinear points.



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24. Use the figure to name :

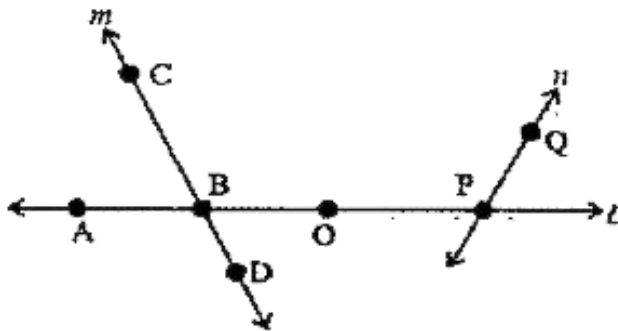


Line containing point P.



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25. Use the figure to name :

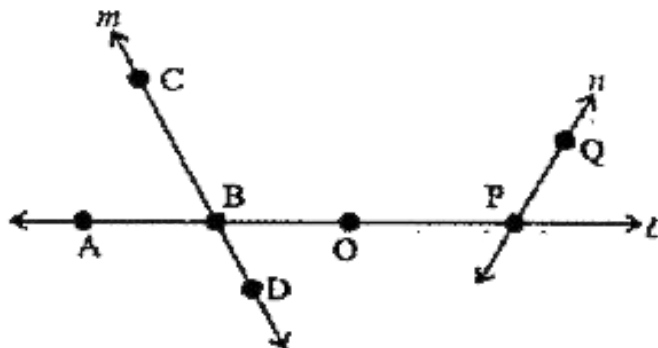


Lines whose point of intersection is B.



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26. Use the figure to name :

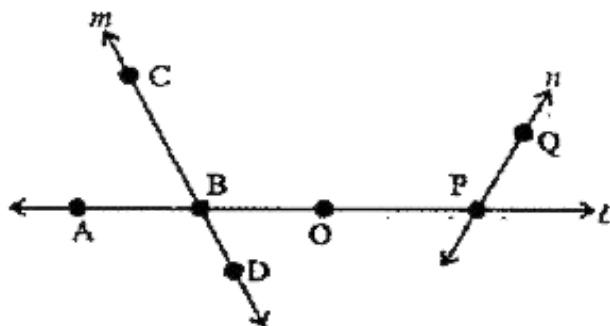


Point of intersection of lines m and l .



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27. Use the figure to name :



All pairs of intersecting lines.



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28. State whether the following statements are true or false

Two lines in a plane always intersect at point.



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29. State which of the following statements are True (T) or False (F) :

If four lines intersect at a point, these are called concurrent lines.



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30. State which of the following statements are True (T) or False (F) :

Points has a size because we can see it as a thick dot on the paper.



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31. State which of the following statements are True (T) or False (F) :

Through a given point, only one line can be drawn.



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32. Which of the following statements are True or False :

A square is a rectangle.



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Exercise 8 2

1. Which of the following are simple curves ?



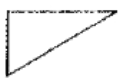
(i)



(ii)



(iii)



(iv)



(v)



(vi)



(vii)



(viii)



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2. Classify the following as open or closed curve.



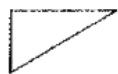
(i)



(ii)



(iii)



(iv)



(v)



(vi)



(vii)

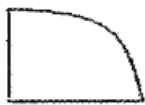


(viii)

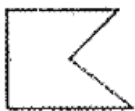


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3. Identify the polygons :



(i)



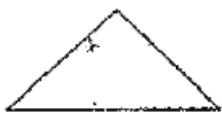
(ii)



(iii)



(iv)



(v)



(vi) D



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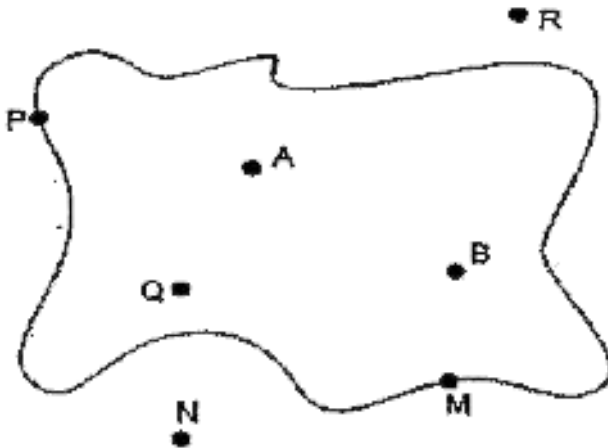
4. Draw any polygon and shade its interior.



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5. Name the points which are :

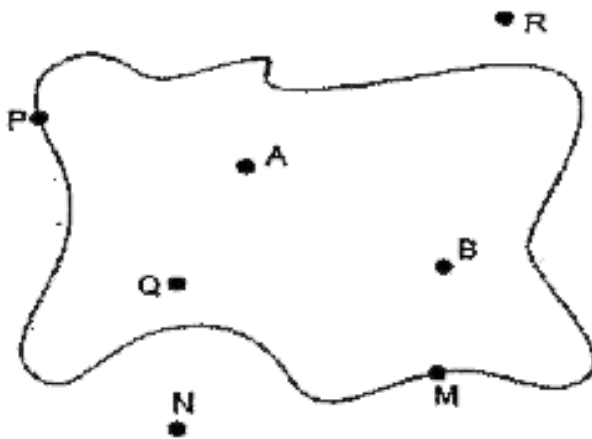
In the interior of the closed figure.



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6. Name the points which are :

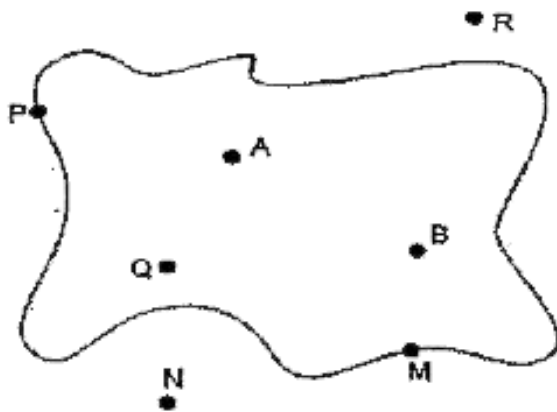
In the exterior of the closed figure.



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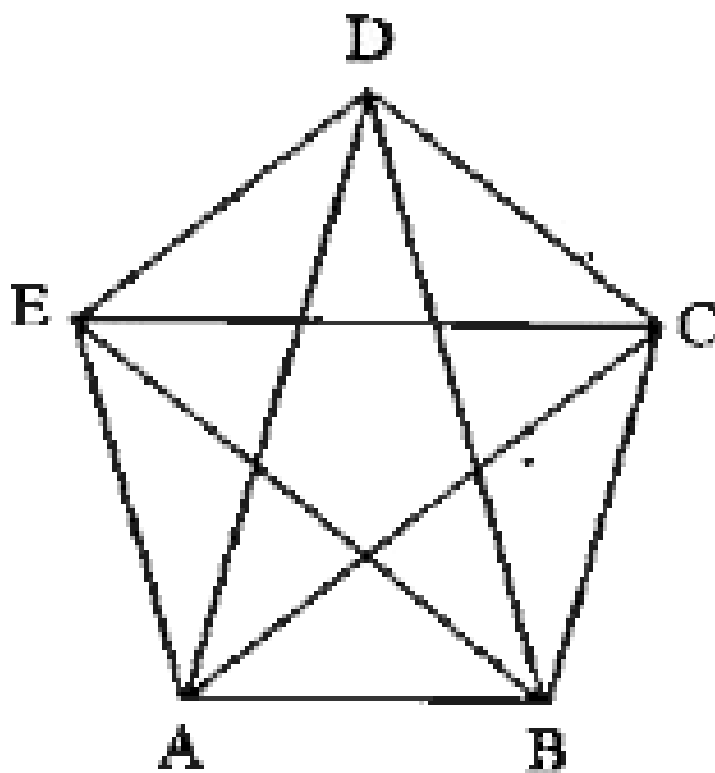
7. Name the points which are :

On the boundary of the closed figure.



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8. In the given figure, name :

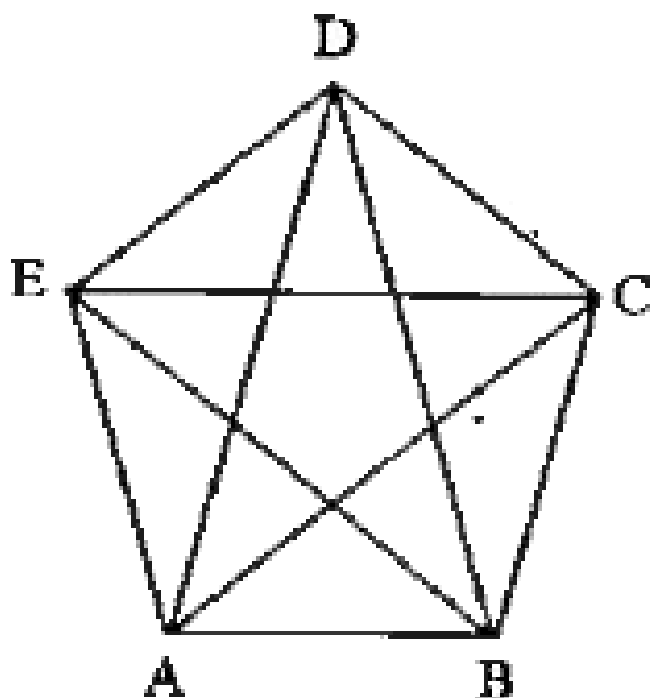


The vertices



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9. In the given figure, name :

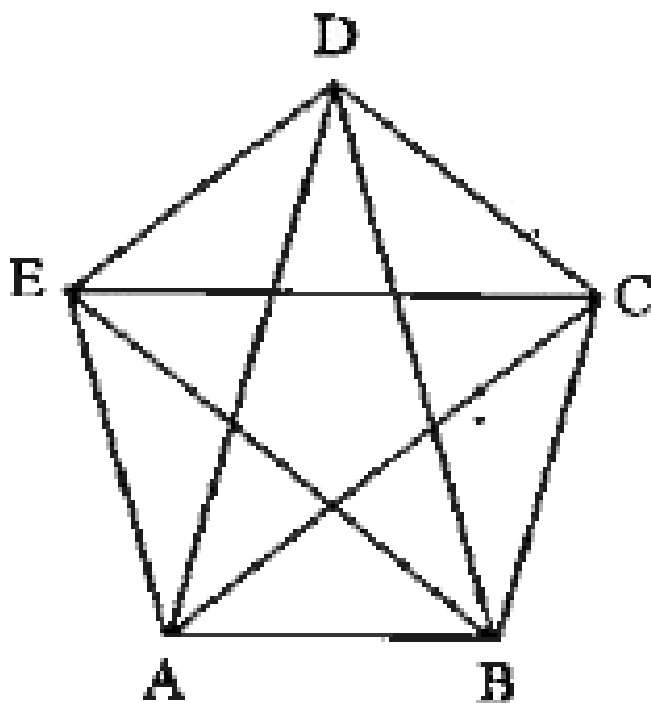


The sides



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10. In the given figure, name :

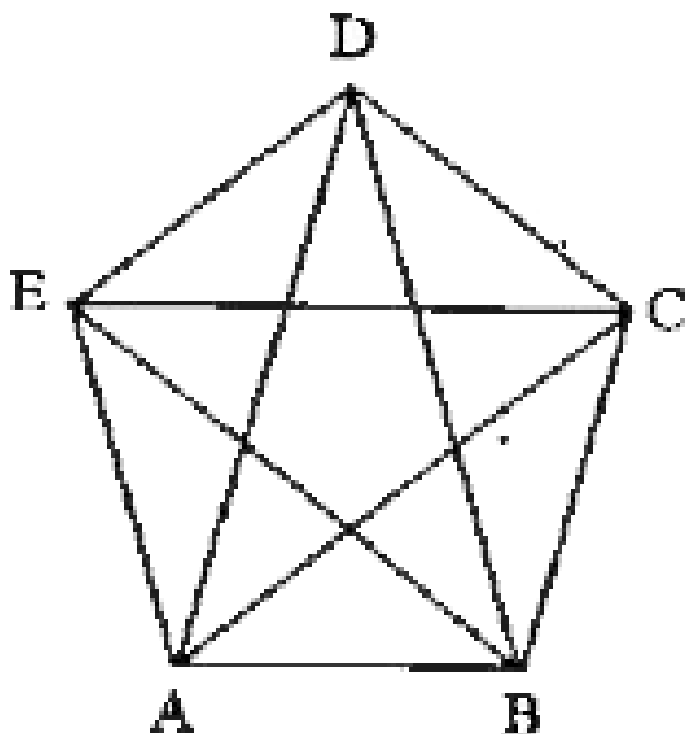


The diagonals



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11. In the given figure, name :

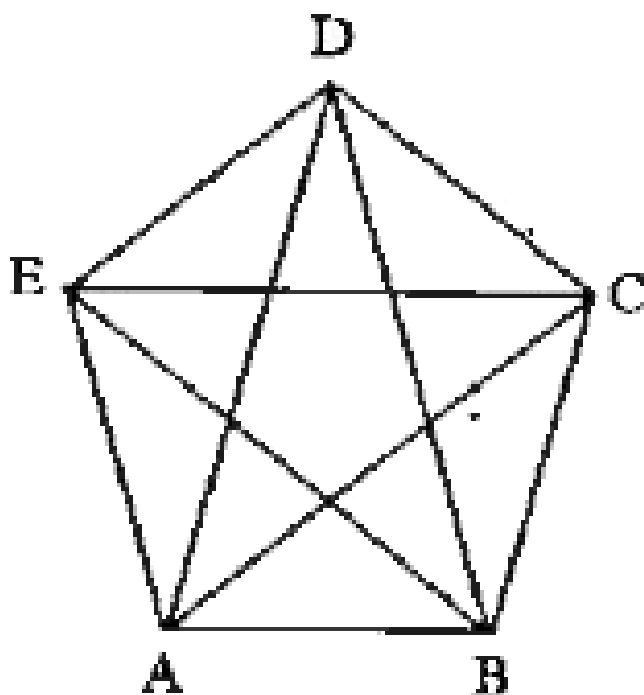


Adjacent sides of AB



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12. In the given figure, name :



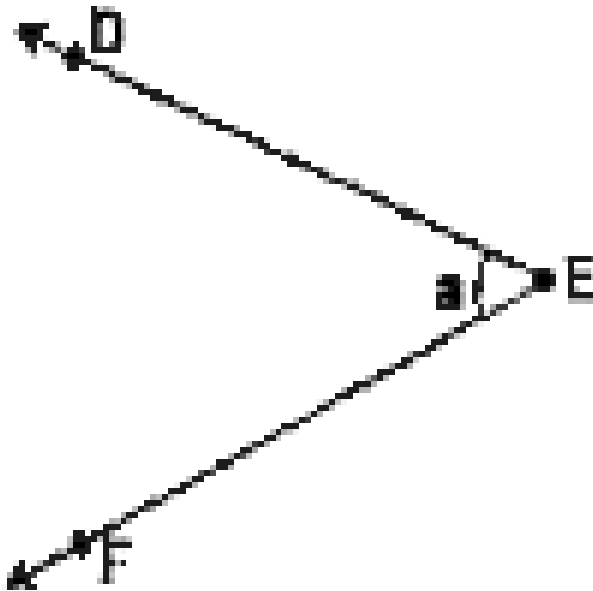
Adjacent vertices of E



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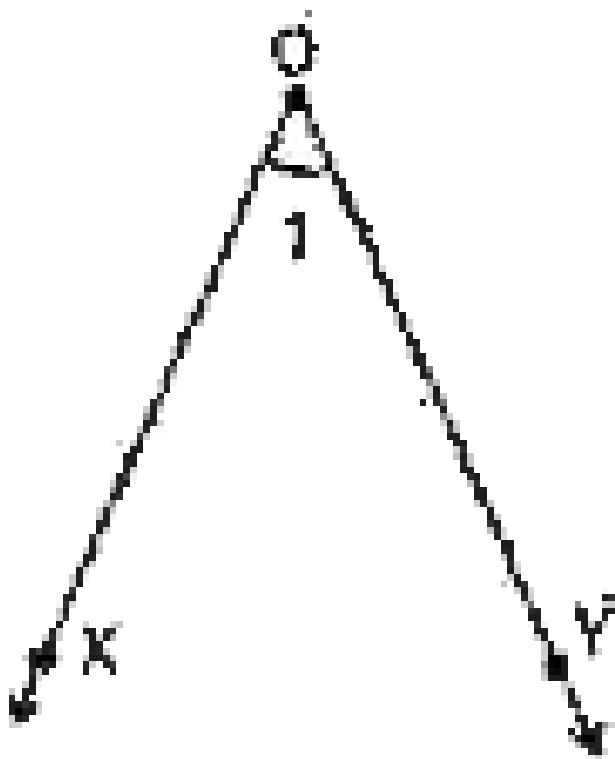
Exercise 8 3

1. Name the given angles in all ways :



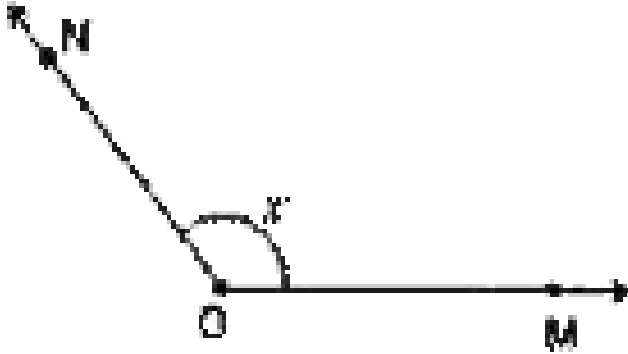
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2. Name the given angles in all ways :



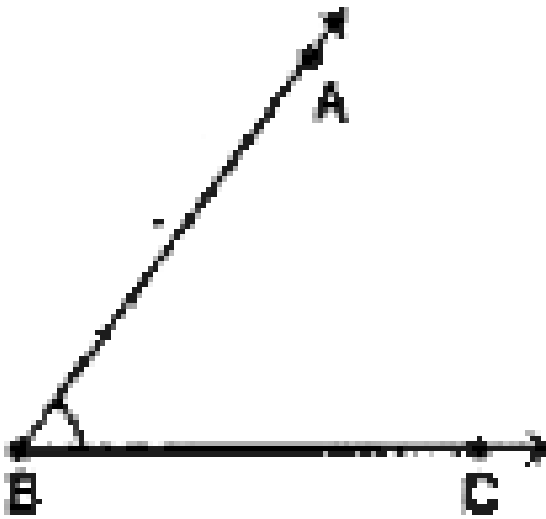
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3. Name the given angles in all ways :



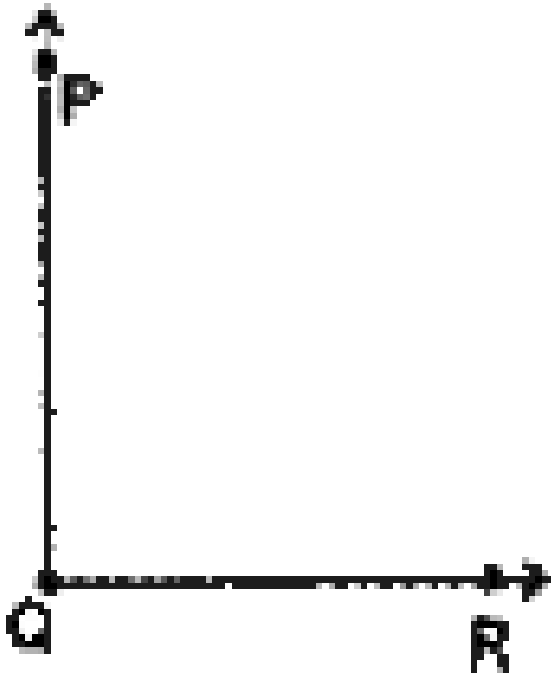
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4. Name the vertex and the arms of given angles :



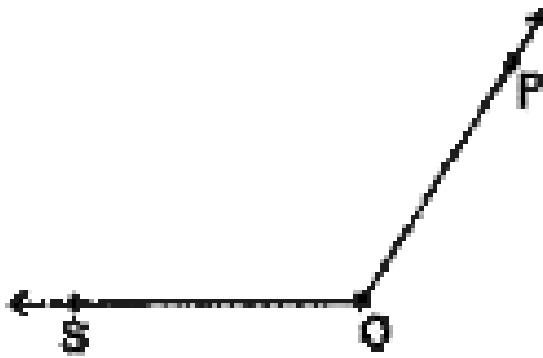
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5. Name the vertex and the arms of given angles :



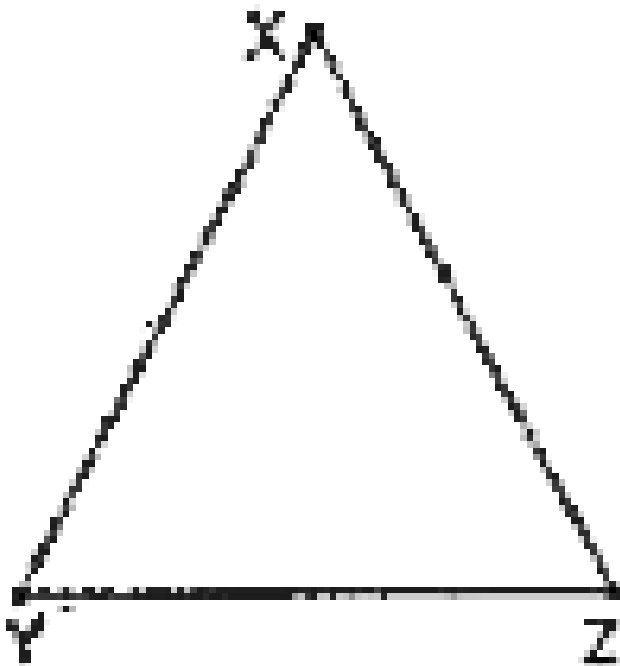
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6. Name the vertex and the arms of given angles :



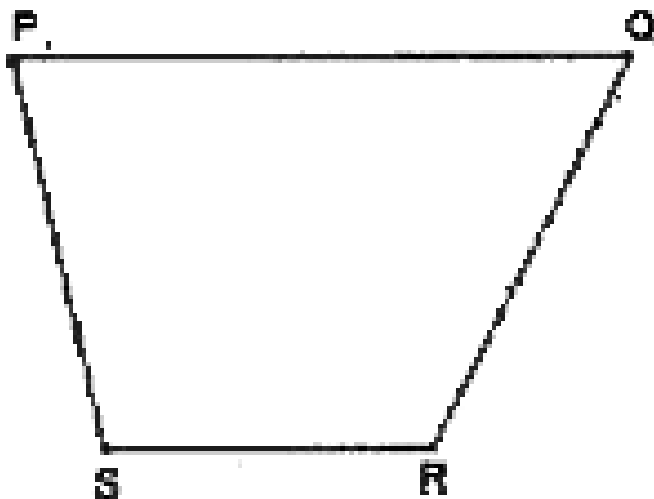
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7. Name all the angles of the given figures :



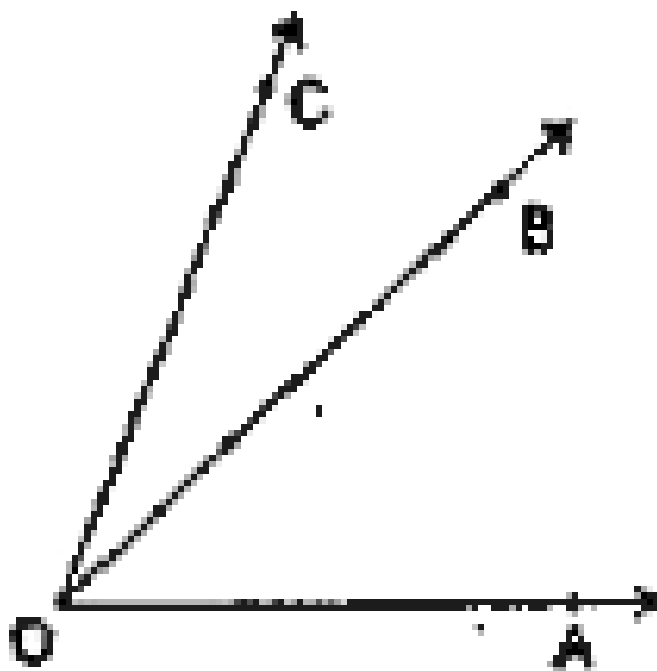
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8. Name all the angles of the given figures :



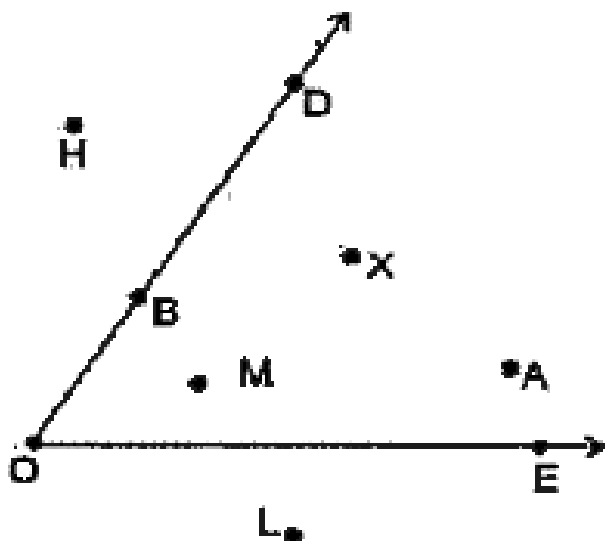
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9. Name all the angles of the given figures :



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10. In the given figure, name the points that lie

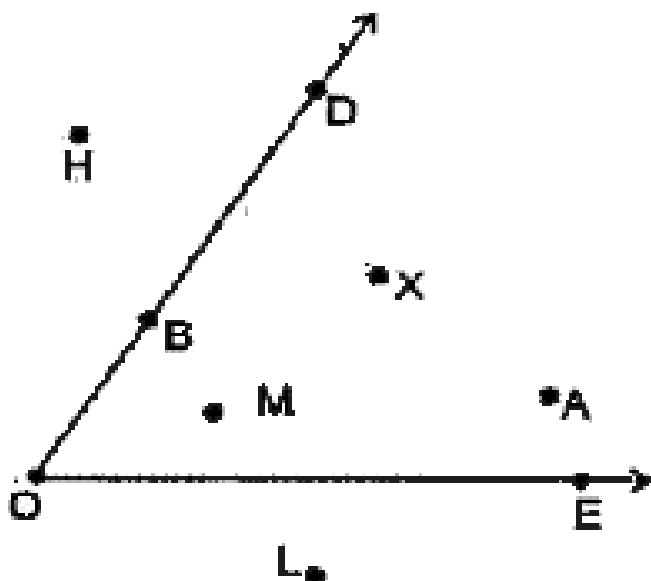


In the interior of $\angle DOE$



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11. In the given figure, name the points that lie

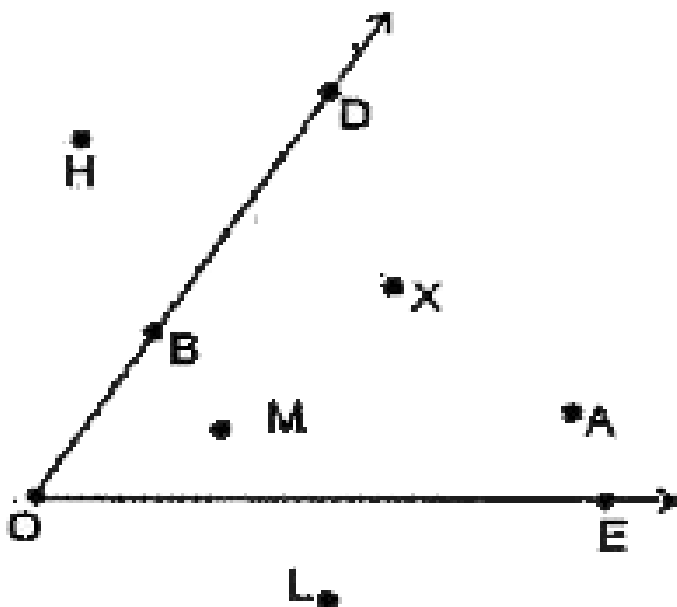


In the exterior of $\angle DOE$



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12. In the given figure, name the points that lie



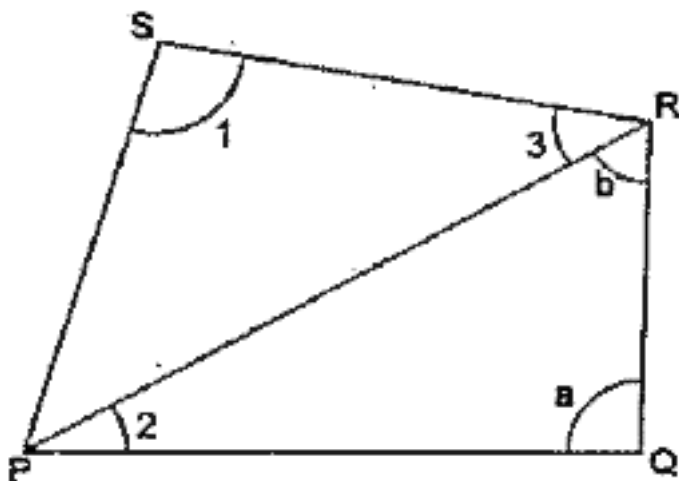
On the $\angle DOE$



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13. In the given figure, write another name for the following angles :

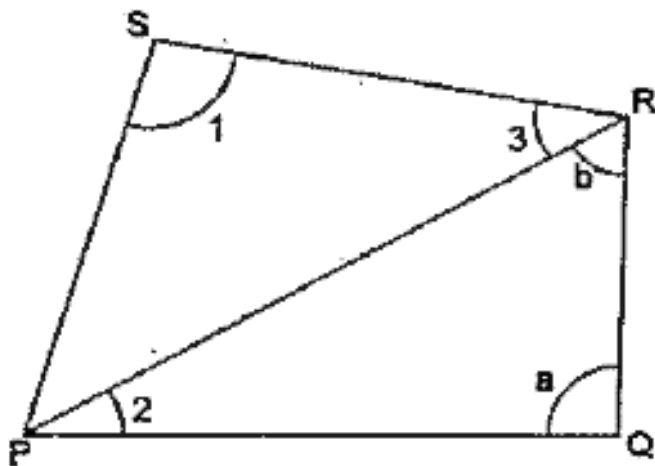
$\angle 1$



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14. In the given figure, write another name for the following angles :

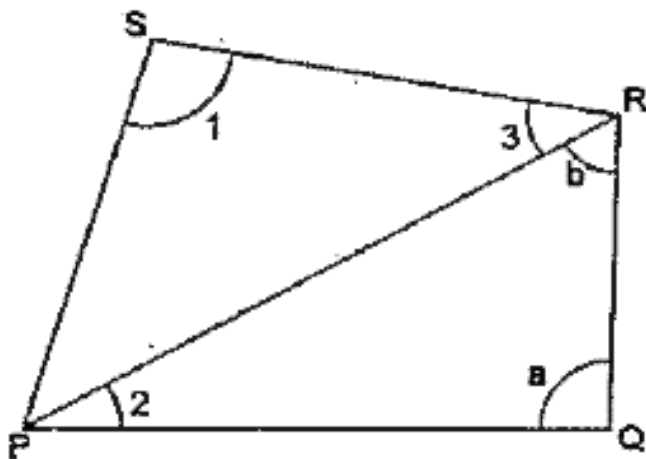
$\angle 2$



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15. In the given figure, write another name for the following angles :

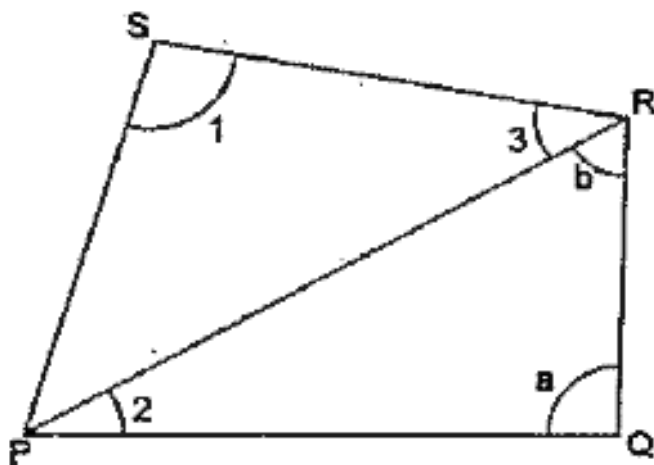
$\angle 3$



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16. In the given figure, write another name for the following angles :

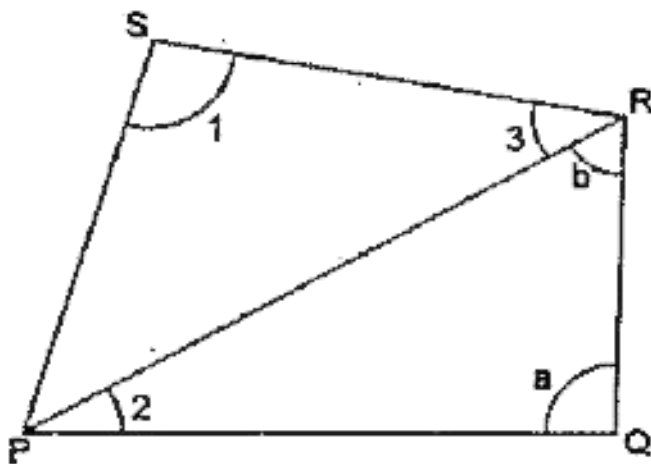
$\angle a$



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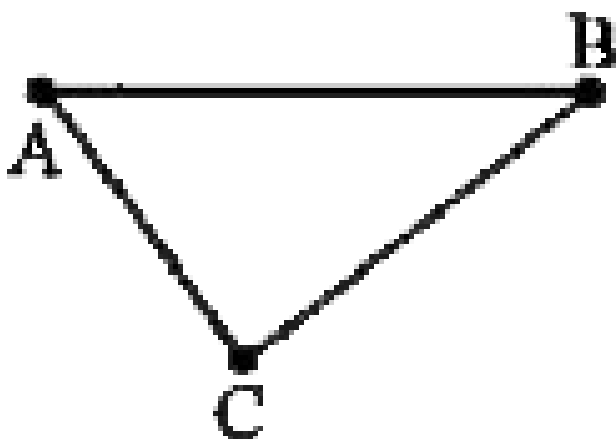
17. In the given figure, write another name for the following angles :

$\angle b$



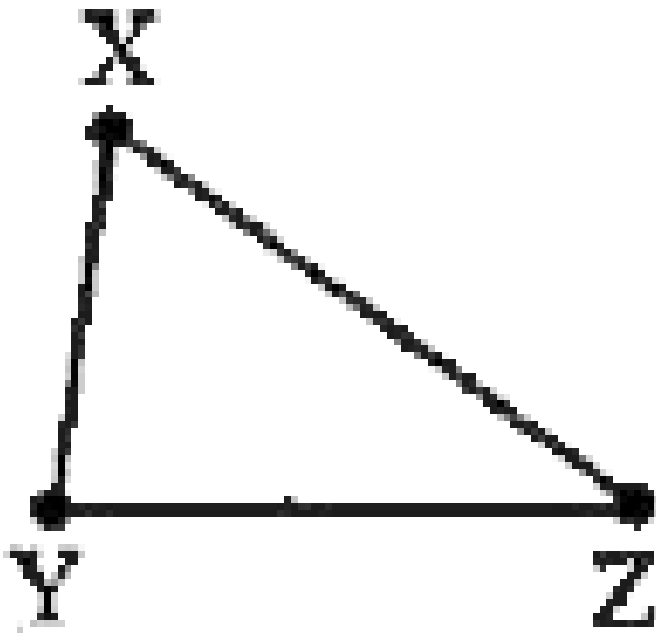
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1. Write all the names of the following triangles in all order : -



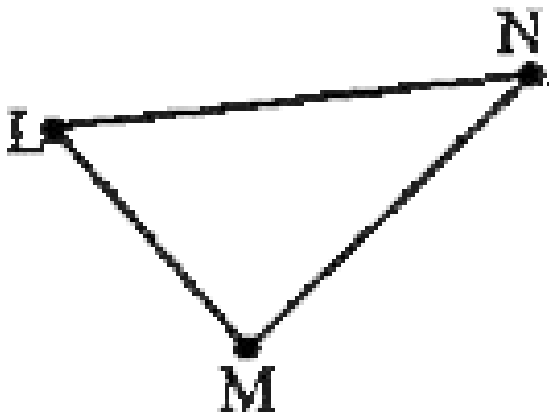
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2. Write all the names of the following triangles in all order : -



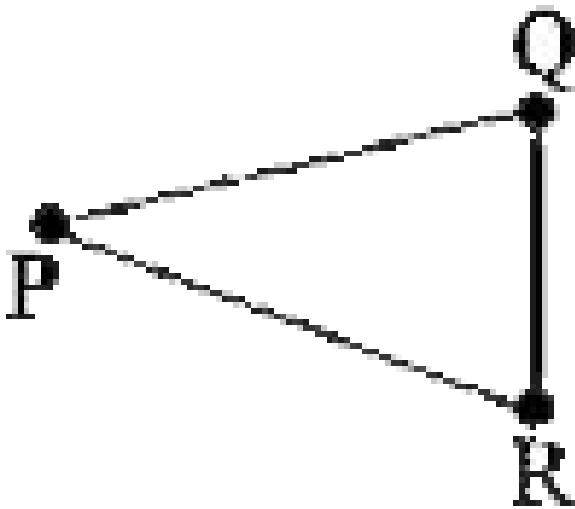
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3. Write all the names of the following triangles in all order : -



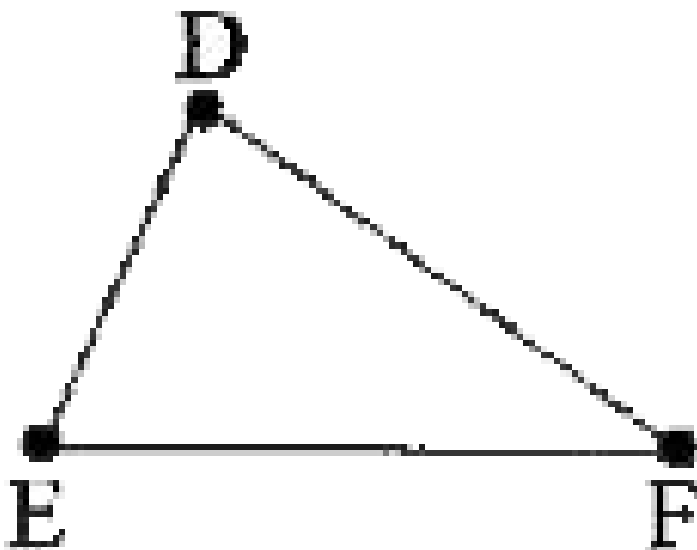
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4. Write the name of vertices, sides and angles of the following triangles :



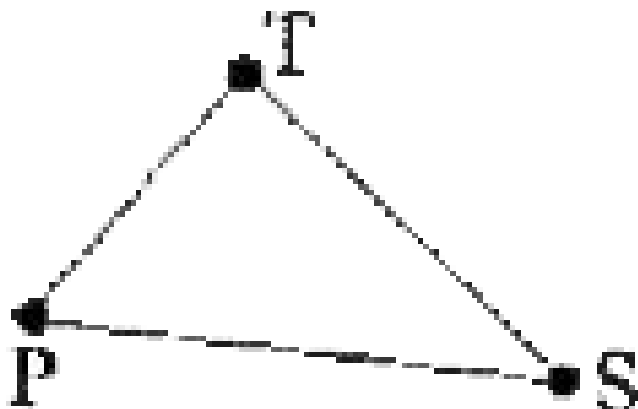
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5. Write the name of vertices, sides and angles of the following triangles :



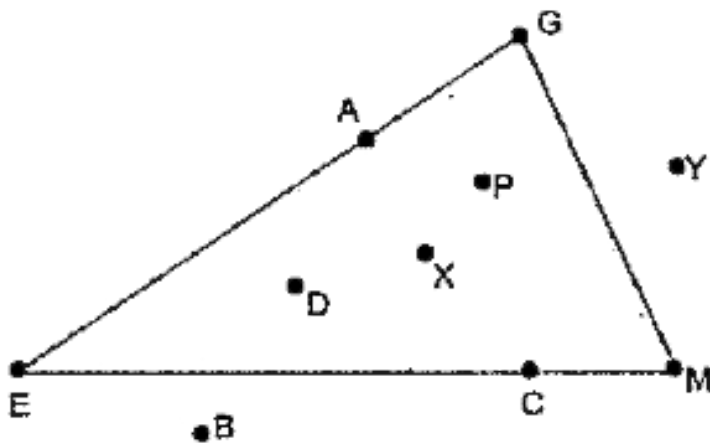
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6. Write the name of vertices, sides and angles of the following triangles :



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7. In the given figure, name the points that lie :

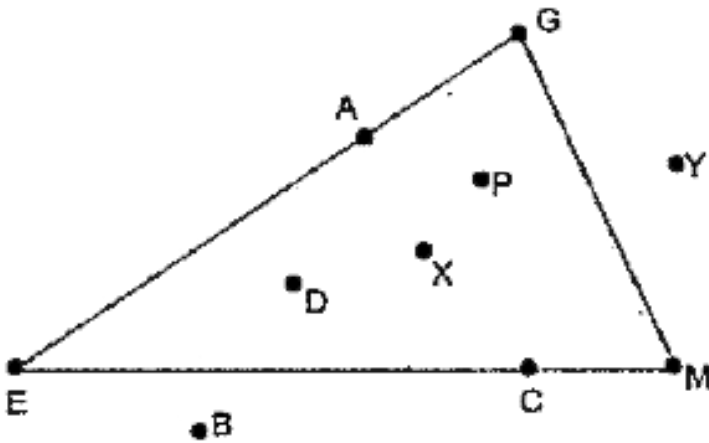


On the boundary of $\triangle GEM$



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8. In the given figure, name the points that lie :

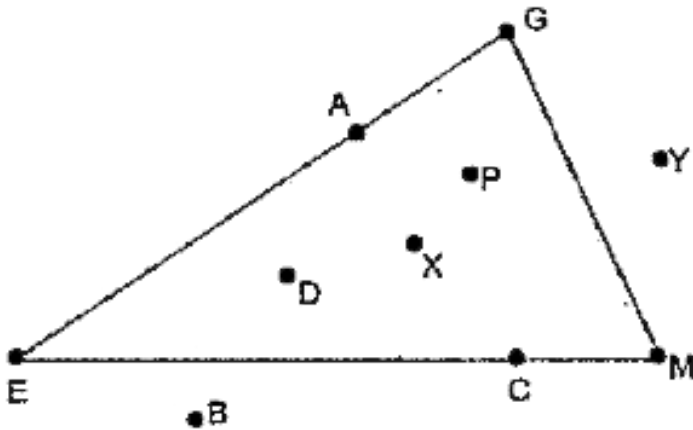


In the interior of $\triangle GEM$



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9. In the given figure, name the points that lie :



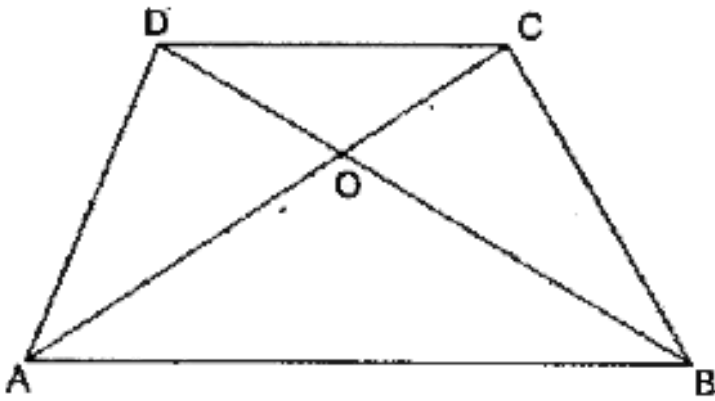
In the exterior of $\triangle GEM$



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10. In the given figure, write the name of : -

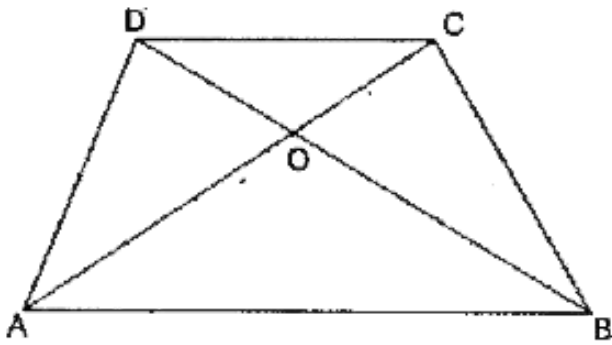
All different triangles



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11. In the given figure, write the name of : -

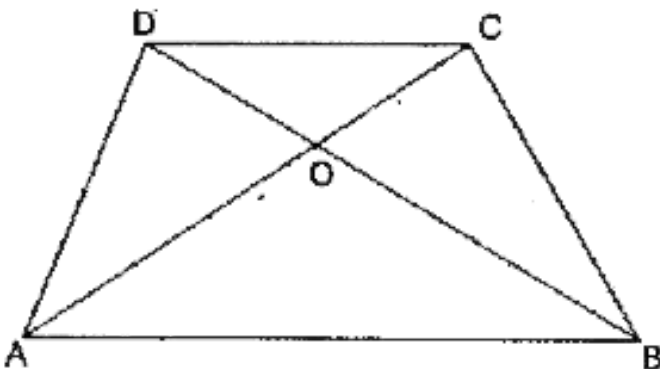
Triangles having O as the vertex.



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12. In the given figure, write the name of : -

Triangles having A as the vertex.





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13. Fill in the blanks of the following :-

A triangle has vertices



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14. Fill in the blanks of the following :-

A triangle has angles.



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15. Fill in the blanks of the following :-

A triangle has sides.



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16. Fill in the blanks of the following :-

A triangle divides the plane into parts



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17. Fill in the blanks of the following :-

A triangle has 3 parts.



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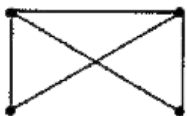
Exercise 8 5

1. Out of the following, Identify the quadrilateral :

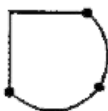
(i)



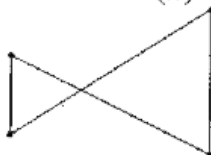
(ii)



(iii)



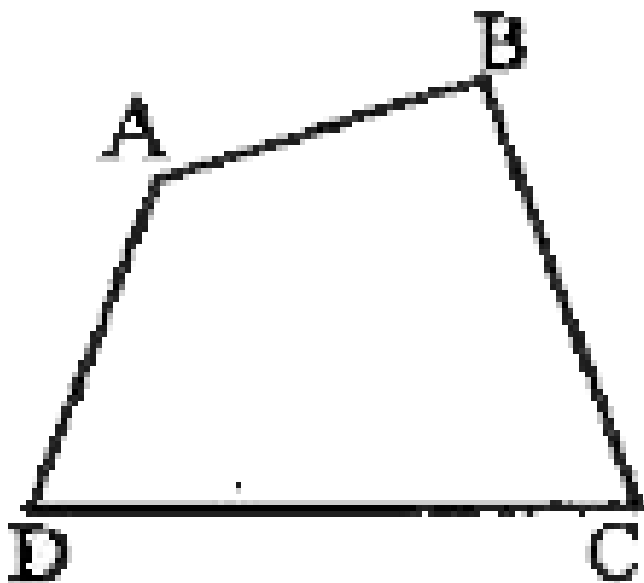
(iv)





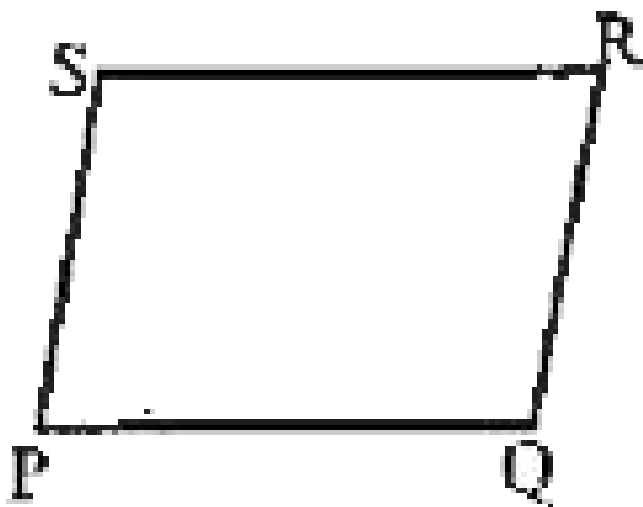
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2. Name the given quadrilaterals :



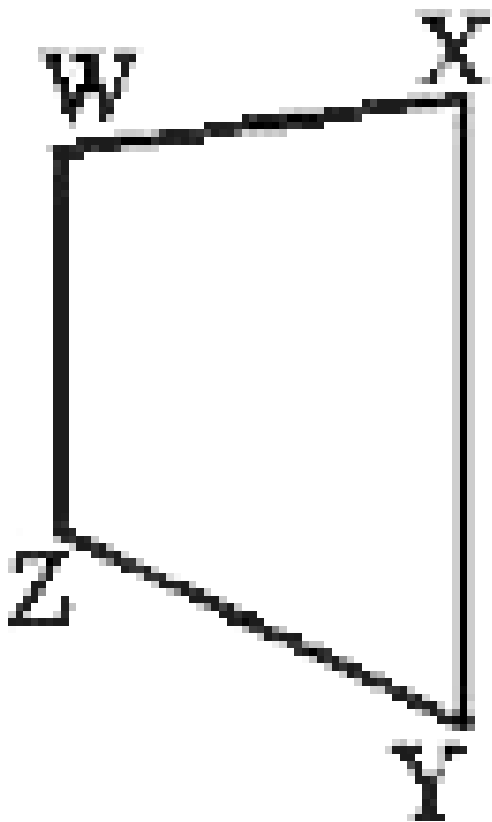
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3. Name the given quadrilaterals :



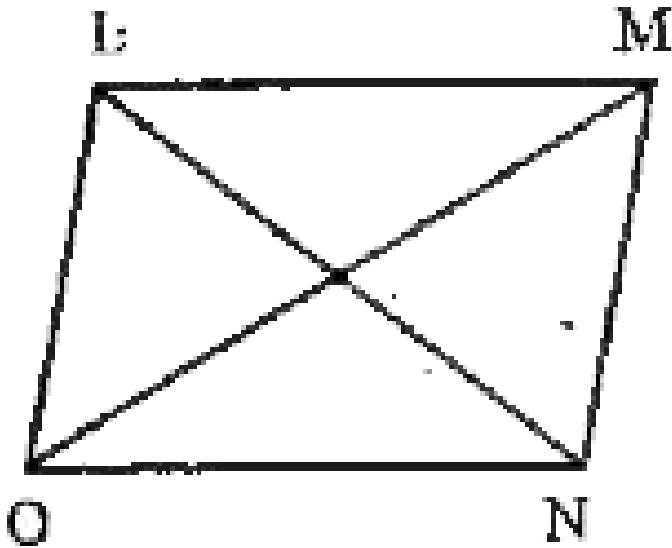
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4. Name the given quadrilaterals :



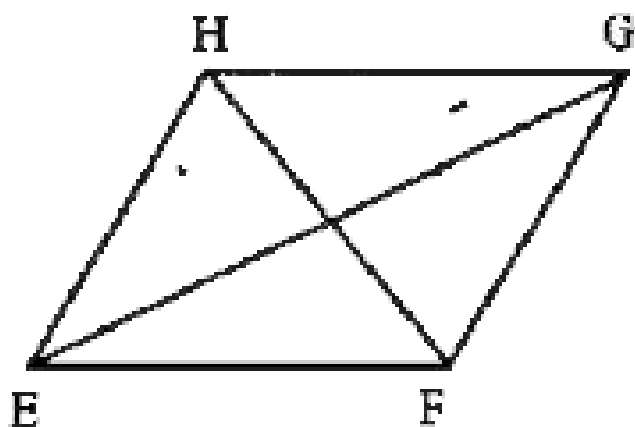
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5. Write the name of all vertices, angles, sides, diagonals of the following quadrilaterals :-



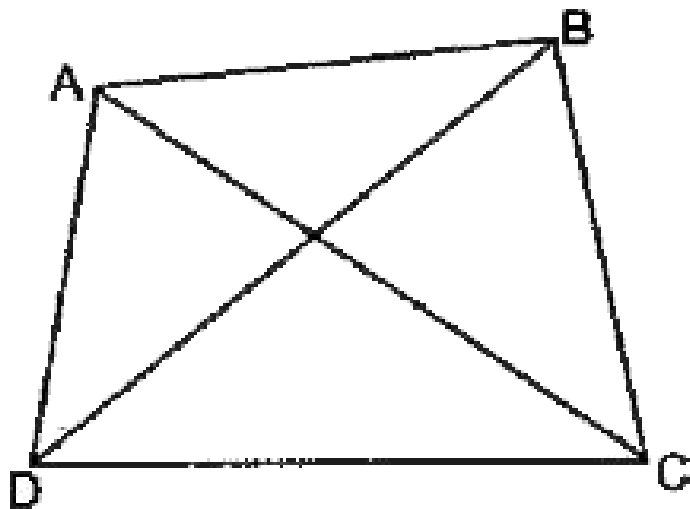
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6. Write the name of all vertices, angles, sides, diagonals of the following quadrilaterals :-



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7. For the given quadrilateral ABCD, name :

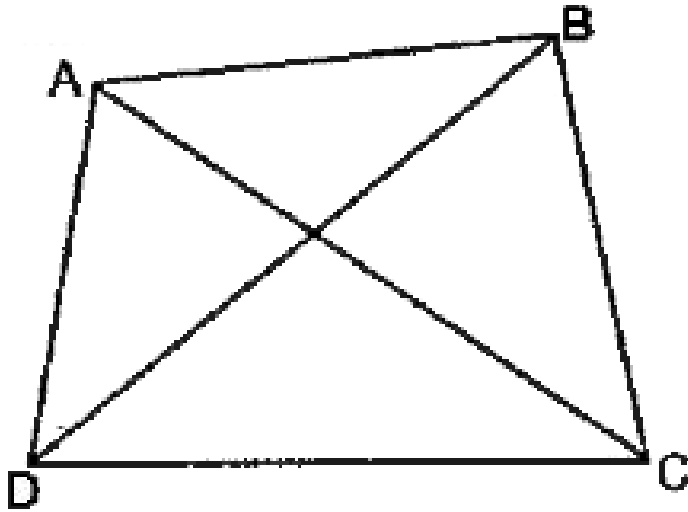


Side opposite to AB



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8. For the given quadrilateral ABCD, name :

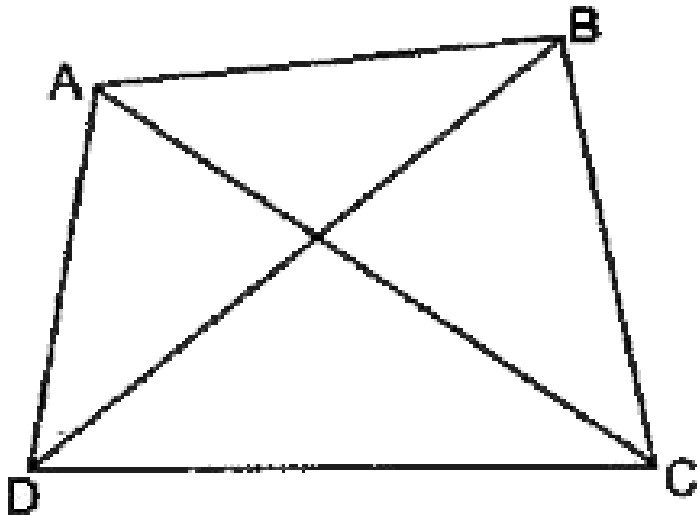


Angles adjacent to B



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9. For the given quadrilateral ABCD, name :

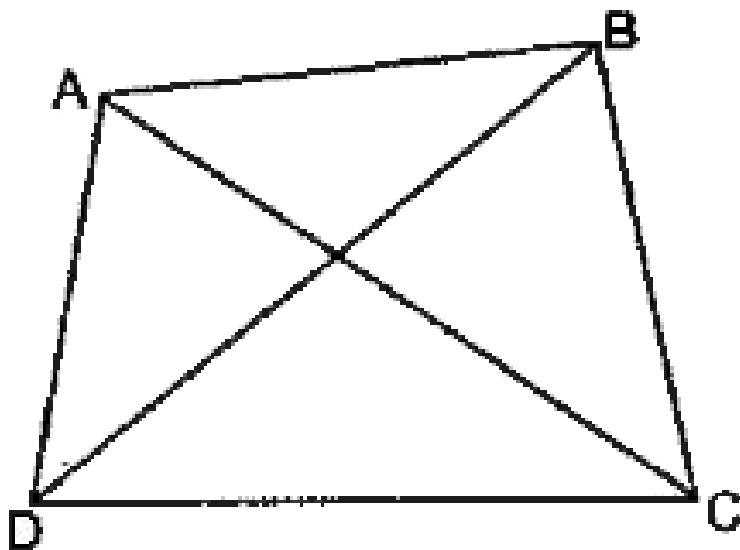


Diagonal joining B and D



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10. For the given quadrilateral ABCD, name :

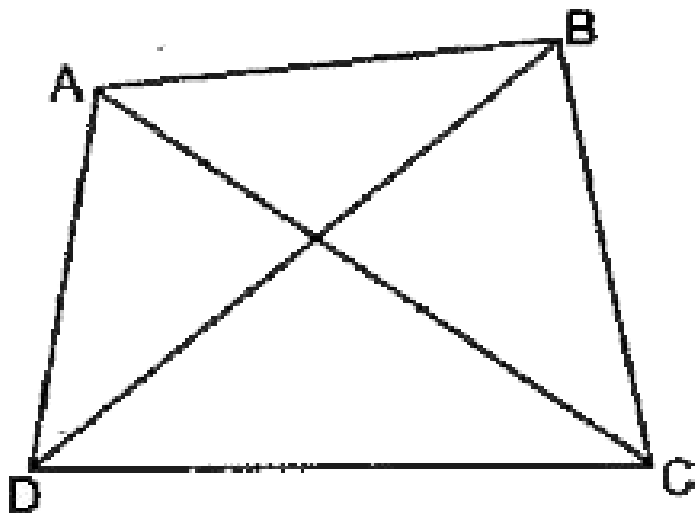


Angle opposite to A



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11. For the given quadrilateral ABCD, name :



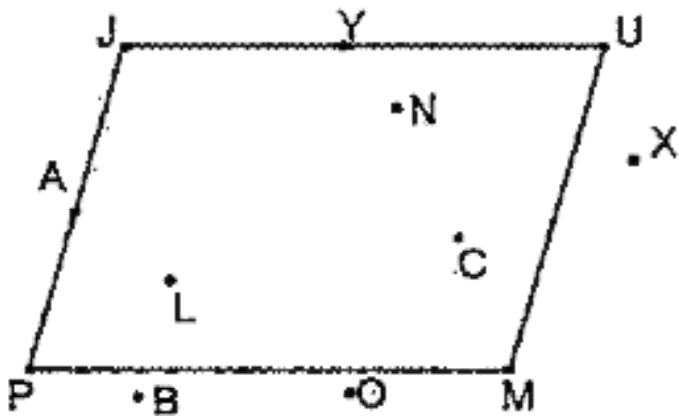
Sides adjacent to CD



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12. In the given quadrilateral JUMP, name the points.

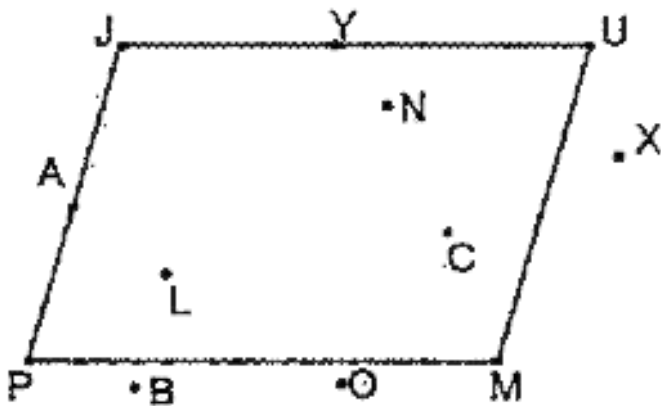
In its interior



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13. In the given quadrilateral JUMP, name the points.

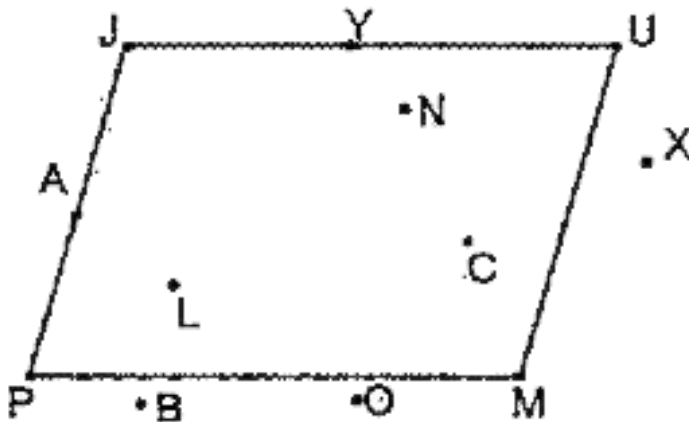
In its exterior



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14. In the given quadrilateral JUMP, name the points.

On its boundary



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15. Fill in the blanks :

A quadrilateral has vertices.



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16. Fill in the blanks :

A quadrilateral has sides.



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17. Fill in the blanks :

A quadrilateral has angles.



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18. Fill in the blanks :

A quadrilateral has diagonals.



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19. Fill in the blanks :

A diagonal divides the quadrilateral into triangles.



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20. Fill in the blanks :

A line segment joining the opposite vertices of a quadrilateral is called its



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21. Fill in the blanks :

The interior and the boundary of a quadrilateral together constitute the region.



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22. State True or False :

A diagonal divides quadrilateral into four triangles.



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23. State True or False :

The angle that have a common vertex are called adjacent angles.



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24. State True or False :

The sides that have a common vertex are called adjacent sides.



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25. State True or False :

A quadrilateral has four diagonals.



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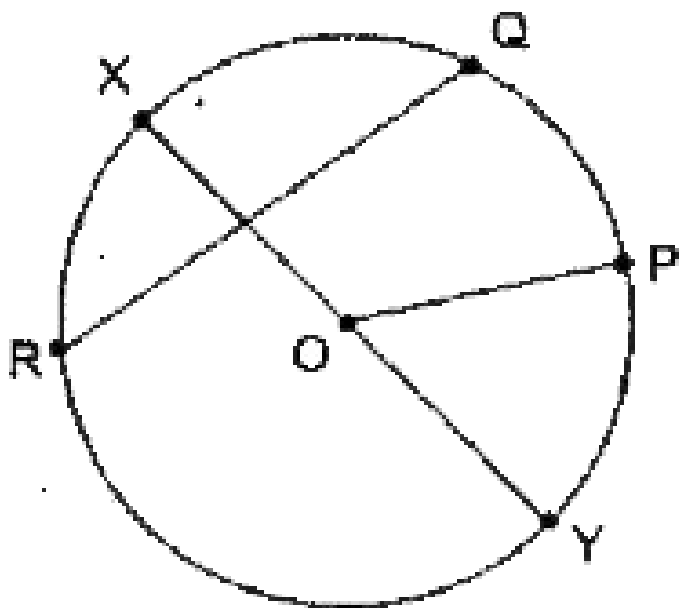
26. State True or False :

The quadrilateral region consists of the exterior and the boundary of the quadrilateral.



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1. In the given figure, write the names of :-

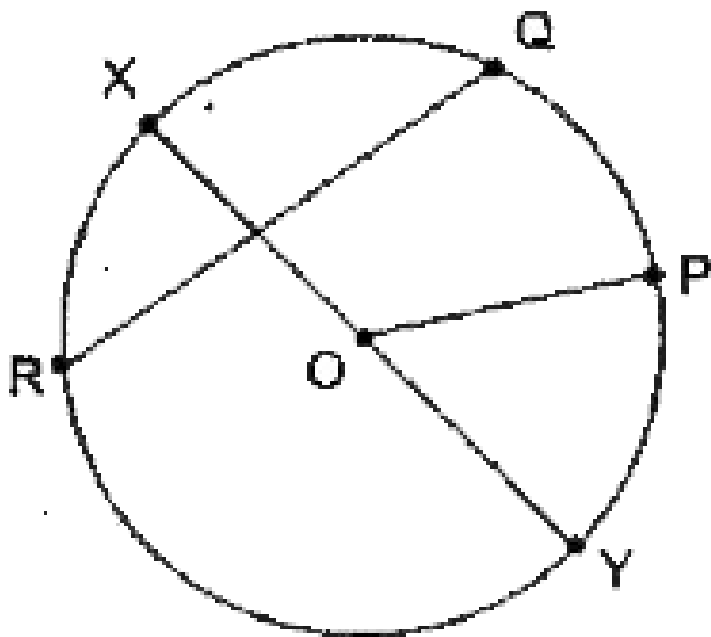


Centre



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2. In the given figure, write the names of :-

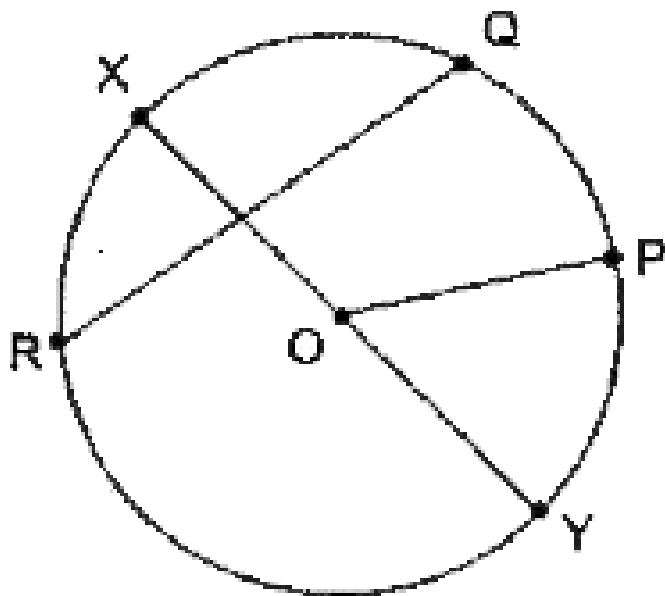


Radii



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3. In the given figure, write the names of :-

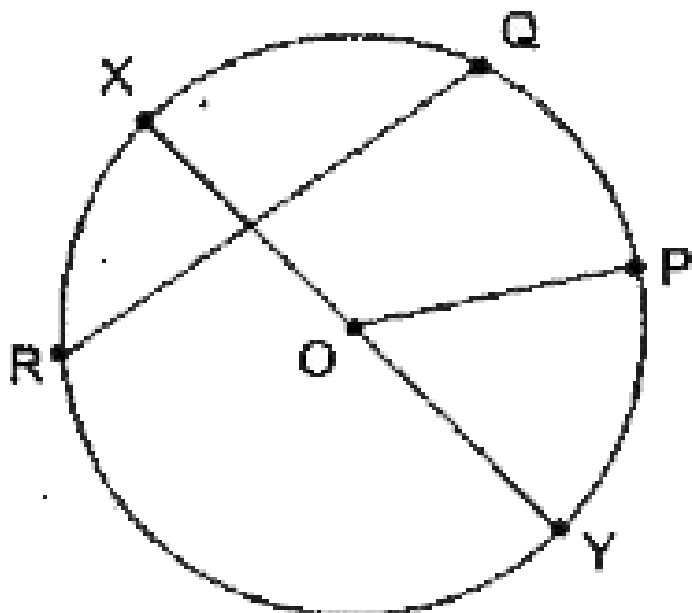


Diameter



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4. In the given figure, write the names of :-

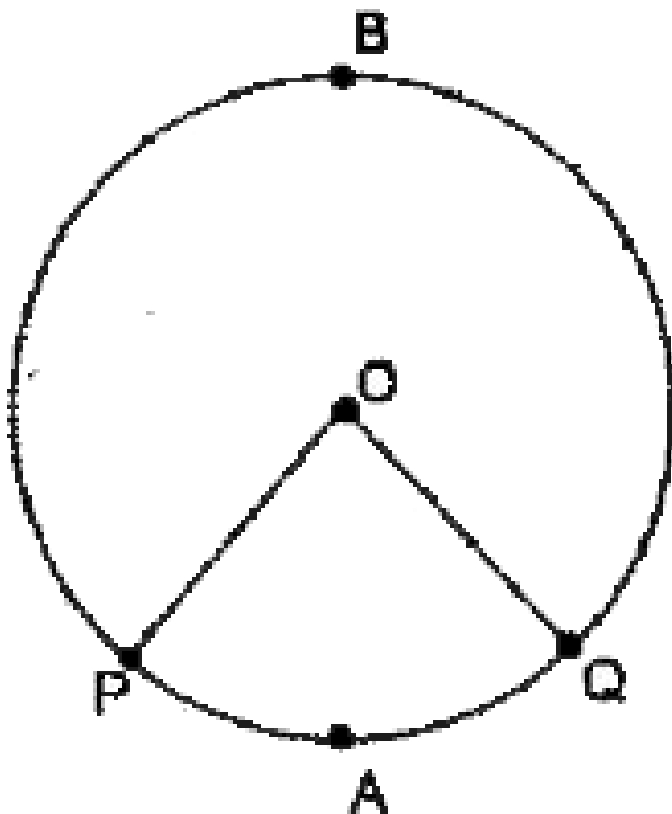


Chord



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5. In the given figure, write the name of

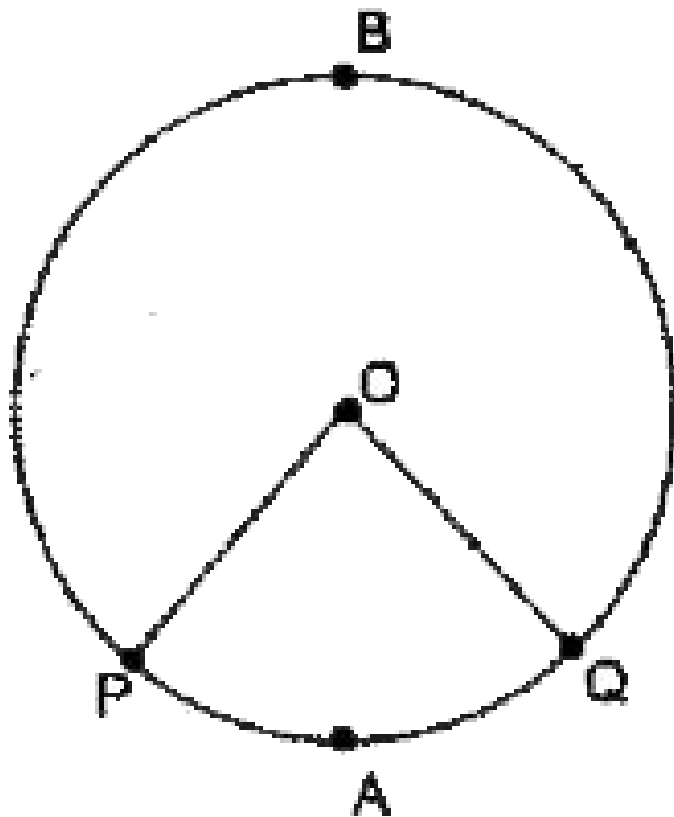


minor arc



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6. In the given figure, write the name of

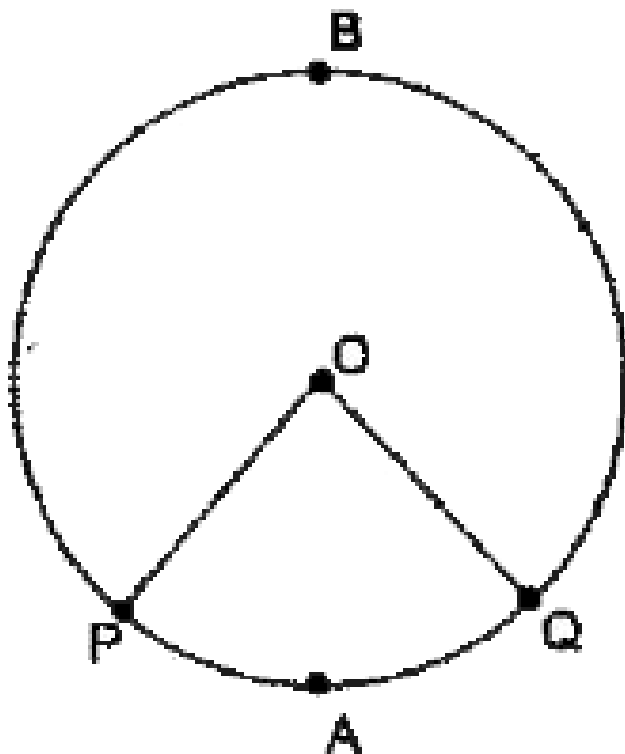


major arc



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7. In the given figure, write the name of

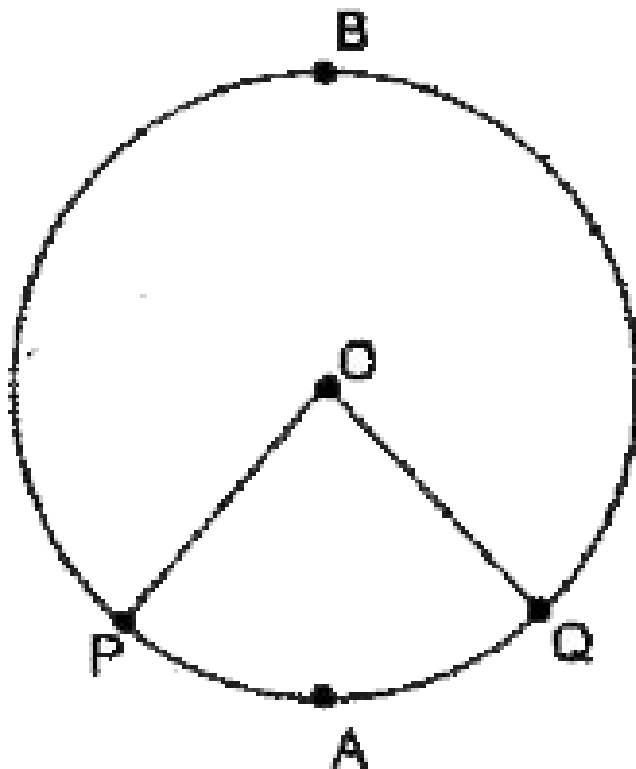


minor sector



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8. In the given figure, write the name of



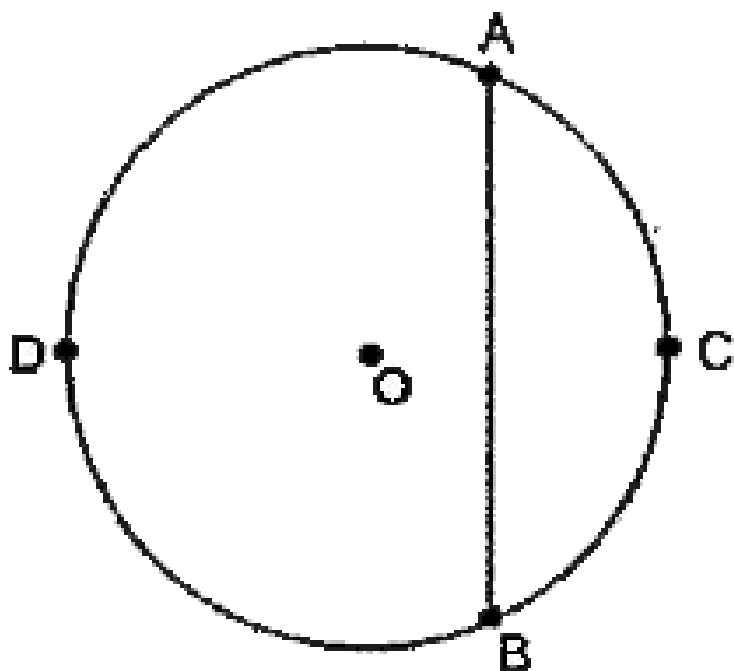
major sector



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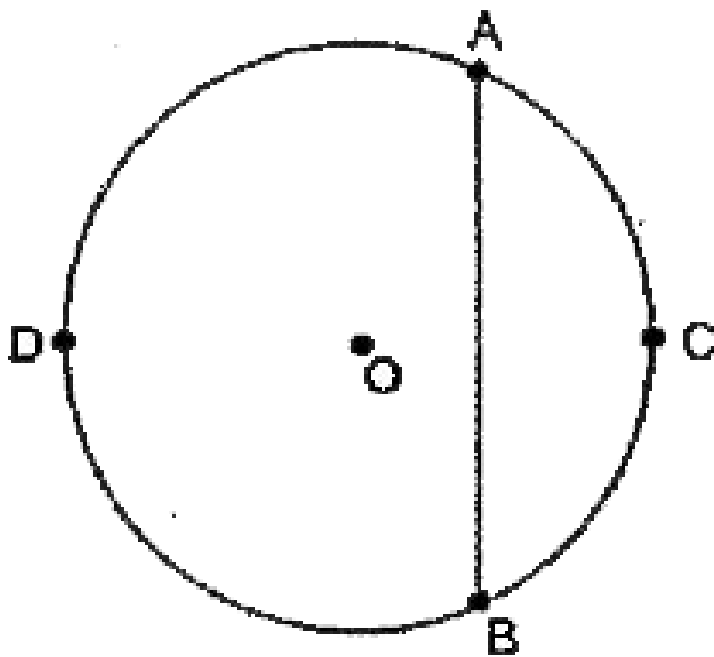
9. In the given figure, write the name of :

Minor segment



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10. In the given figure, write the name of :

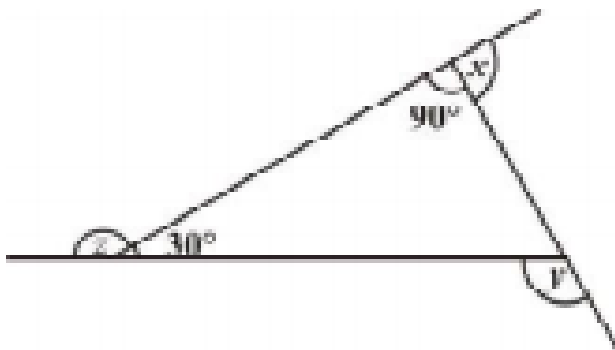


Major segment



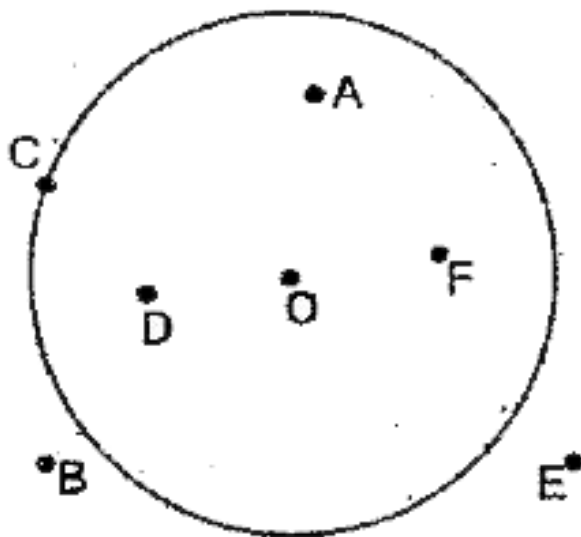
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11. Find $x+y+z$



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12. In the given figure, name the points :-

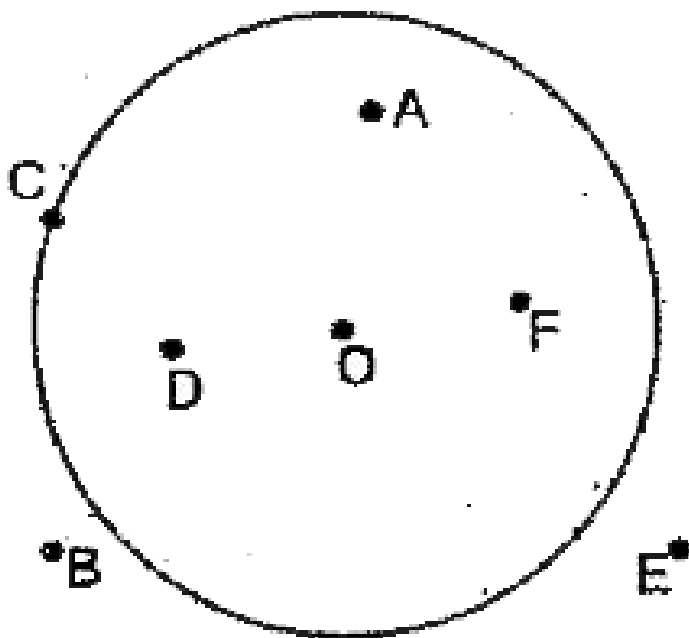


On its boundary (circumference)



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13. In the given figure, name the points :-



In its exterior



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14. Find the diameter of the circle whose radius is :

5 cm



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15. Find the diameter of the circle whose radius is :

4 cm



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16. Find the diameter of the circle whose radius is :

10 cm



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17. If the diameter of a circle is 12 cm. Find the radius.



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18. Fill in the blanks :-

The distance around a circle is called



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19. Fill in the blanks :-

The diameter of a circle is times its radius.



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20. Fill in the blanks :-

The longest chord of circle is



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21. Fill in the blanks :-

All the radii of a circle are of length.



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22. Fill in the blanks :-

The diameter of a circle passes through
..... .



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23. Fill in the blanks :-

A circle divides all the points in a plane into
..... parts.



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24. State true or false : -

The diameter of a circle is equal to its radius.



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25. State true or false : -

The diameter is a chord of circle.



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26. State true or false : -

A radius is a chord of the circle.



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27. State true or false : -

Every circle has a centre.



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28. State true or false : -

The region enclosed by a chord and arc is called a segment.



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Multiple Choice Questions

1. How many lines can pass through a point ?

A. 1

B. 2

C. 4

D. Infinite

Answer: D



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2. The number of points lie on a line are

.

A. 2

B. 4

C. 1

D. Infinite

Answer: D



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3. The number of lines passes through two points are

A. 1

B. 2

C. 3

D. Infinite

Answer: A



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4. In how many parts, a closed curve divides the plane ?

A. 1

B. 2

C. 3

D. 4

Answer: C



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5. A quadrilateral has Diagonals.

A. 1

B. 2

C. 3

D. 4

Answer: B



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6. Which one of the following is not a polynomial ?

A. Triangle

B. Pentagon

C. Circle

D. Quadrilateral

Answer: C



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7. A triangle has _____ parts.

A. 3

B. 6

C. 9

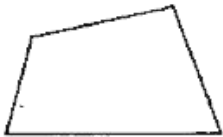
D. 2

Answer: B



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8. Which of the following is not a quadrilateral ?



A.



B.

C.



D.



Answer: B



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9. A line segment joining the opposite vertices of a quadrilateral is called its

A. Diagonal

B. Side

C. Angle

D. Region

Answer: A



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10. The radius of a circle is 4 cm then the diameter is

A. 8 cm

B. 2 cm

C. 6 cm

D. 12 cm

Answer: A



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11. If the diameter of a circle is 12 cm. Find the radius.

A. 24 cm

B. 6 cm

C. 18 cm

D. 4 cm

Answer: B



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12. The longest chord of a circle is

A. Arc

B. Perimeter

C. Diameter

D. Radius

Answer: C



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