



MATHS

NCERT - NCERT

MATHEMATICS(Hinglish)

BASIC GEOMETRICAL IDEAS

Exercise 4 1

1. Consider the following figure of line MN Say whether following statements are true or false

in context of the given figure.(a) Q, M, O, N, P are points on the line MN.(b) M, O, N are points on a line segment MN.(c) M and N are end points of line segment MN.(d) O and N are end points of line segment OP.(e) M is one of the end points of line segment QO.(f) M is point on ray OP.(g) Ray OP is different from ray QP.(h) Ray OP is same as ray OM.(i) Ray OM is not Opposite to ray OP.(j) O is not an initial point of OP.(k) N is the initial point of NP and NM.



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2. How many lines can pass through

(a) one given point?

(b) two given points



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3. Draw a rough figure and label suitably in each of the following cases:

(a) Point p lies on AB .

(b) XY and PQ intersect at M .

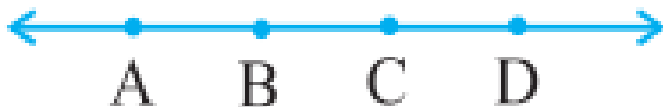
(c) Line l contains E and F but not D.

(d) OP r and OQ meet at O



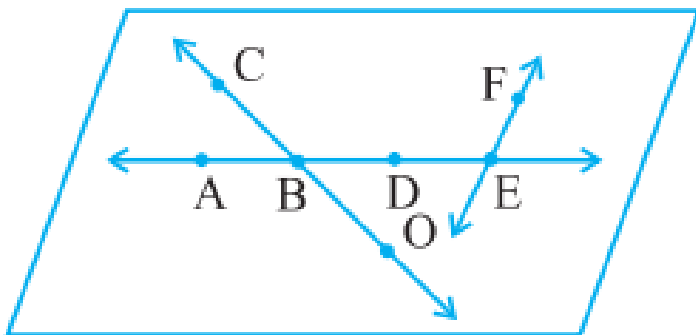
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4. Name the line given in all possible (twelve) ways, choosing only two letters at a time from the four given.



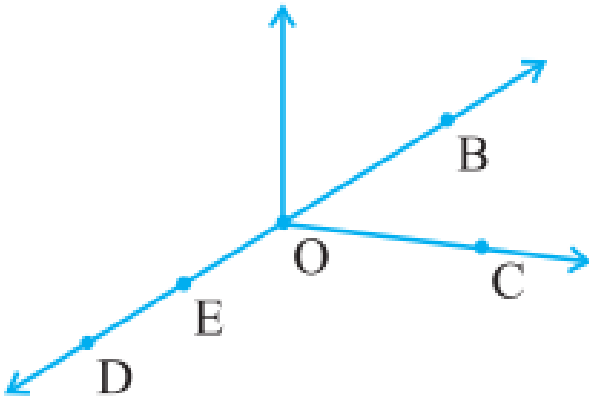
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5. Use the figure to name :(a) Line containing point E.(b) Line passing through A.(c) Line on which O lies(d) Two pairs of intersecting lines



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6. Use the figure to name :(a) Five points(b) A line(c) Four rays(d) Five line segments



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Exercise 4 3

1. Draw rough diagrams of two angles such that they have a) One point in common.(b) Two points in common.(c) Three points in

common.(d) Four points in common.(e) One ray in common



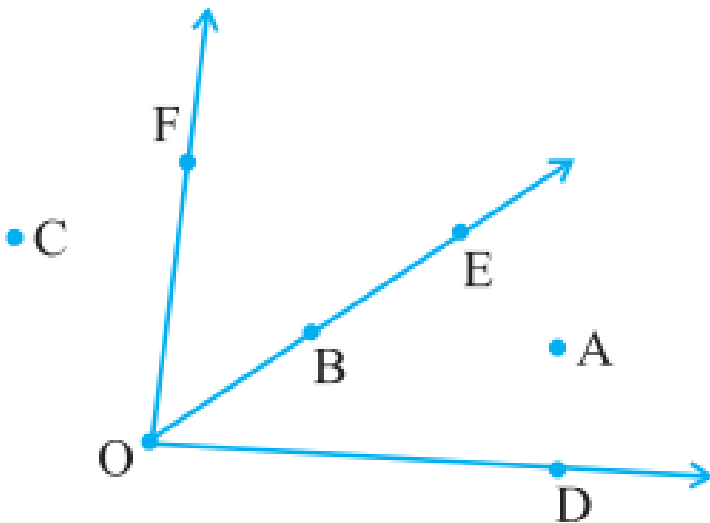
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2. Draw a rough sketch of a triangle ABC. Mark a point P in its interior and a point Q in its exterior. Is the point A in its exterior or in its interior?



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3. (a) Identify three triangles in the figure. (b) Write the names of seven angles. (c) Write the names of six line segments. (d) Which two triangles have $\angle B$ as common?



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Exercise 4 5

1. Draw a rough sketch of a quadrilateral PQRS. Draw its diagonals. Name them. Is the meeting point of the diagonals in the interior or exterior of the quadrilateral?



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2. Draw a rough sketch of a quadrilateral KLMN. State, (a) two pairs of opposite sides, (b)

two pairs of opposite angles,(c) two pairs of adjacent sides,(d) two pairs of adjacent angles.



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Exercise 4 2

1. Illustrate, if possible, each one of the following with a rough diagram:

(a) A closed curve that is not a polygon.

(b) An open curve made up entirely of line

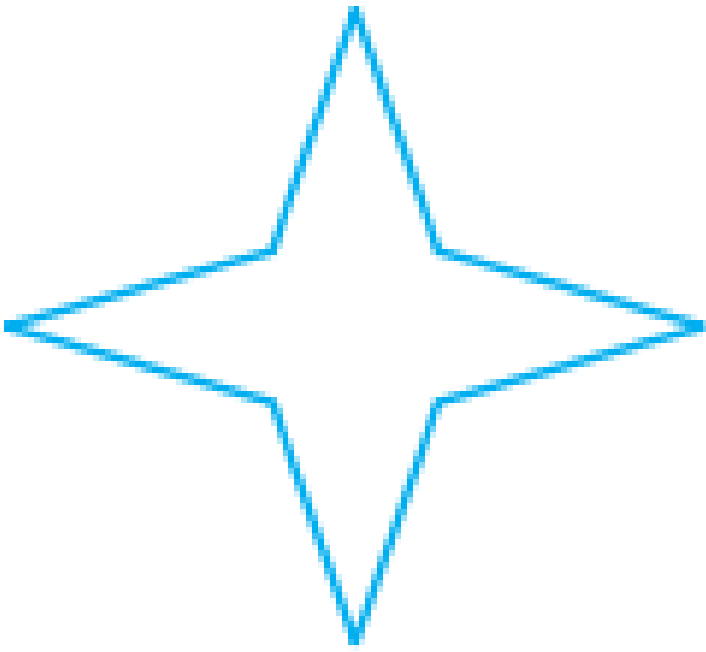
segments.

(c) A polygon with two sides.



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2. Consider the given figure and answer the questions :(a) Is it a curve? (b) Is it closed?



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3. Draw any polygon and shade its interior.



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4. Draw rough diagrams to illustrate the following :

(a) Open curve

(b) Closed curve.



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5. Classify the following curves as (i) Open or (ii) Closed.



(a)



(b)



(c)



(d)



(e)



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Exercise 4 6

1. Draw any circle and mark (a) its centre (b) a radius (c) a diameter (d) a sector (e) a segment (f) a point in its interior (g) a point in its exterior (h) an arc



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2. (a) Is every diameter of a circle also a chord?

(b) Is every chord of a circle also a diameter?



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3. From the figure, identify : (a) the centre of

circle (b) three radii (c) a diameter

(d) a chord (e) two points in the interior (f) a

point in the exterior (g) a sector (h) a

segment



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4. Say true or false :(a) Two diameters of a circle will necessarily intersect.(b) The centre of a circle is always in its interior.



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