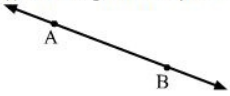
Basic Geometric Tools Ex 18.2 Q6

Answer :

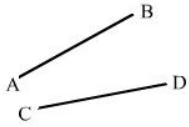
	Column A		Column B
i	Line segment has	c	two end-point
ii	Two segments may intersect	a	at a point
iii	Two segments are congruent	b	if they have equal lengths
iv	Line segment is	d	portion of a line

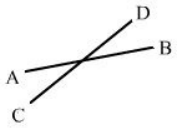
Explanation:

(i) A line segment is a part of a line that is bounded by two distinct end points.



(ii) Two line segments will either not intersect at all or intersect at one point. It can never intersect at more than one point.



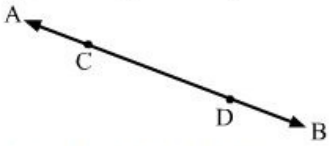


(iii) Line segments are congruent if they have the same lengths.

If AB = 6 cm and CD = 6 cm

Then, AB and CD are congruent.

(iv) A line segment is a part of a line that is bounded by two distinct end points.



Here, AB is a line and CD is a line segment

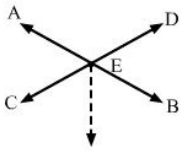
So, segment CD is a portion of a line AB.

Basic Geometric Tools Ex 18.2 Q7

Answer :

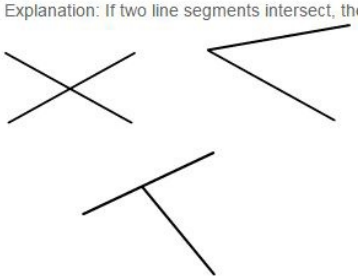
(i) False

Explanation: Two line segments can intersect maximum at one point and one point can not make a line segment.



(ii) True

Explanation: If two line segments intersect, then point of intersection will not be any of the end points.



(iii) True

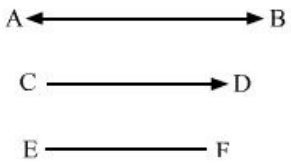
Explanation: A portion of line that starts at a point and has no end point is called a ray, whereas aline segment has both its end points fixed. So every ray is a segment.

(iv) False

Both ends points of a line segment are fixed but ray has only one end fixed. Thus, a segment can never be a ray.

Basic Geometric Tools Ex 18.2 Q8

Answer :



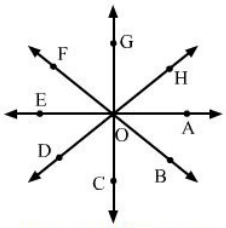
A line can be drawn to infinity in both the directions. AB is a line

A line segment has both ends fixed. EF is a line segment.

A ray has one end fixed and another end can be drawn to infinity. CD is a ray.

Basic Geometric Tools Ex 18.2 Q9

Answer :



We know that a ray has fixed starting point and it can be drawn to infinity. If we take O as starting point, we will have a ray in every given direction.

So, our rays are, $\overrightarrow{OA}$, $\overrightarrow{OB}$, $\overrightarrow{OC}$, $\overrightarrow{OD}$, $\overrightarrow{OE}$, $\overrightarrow{OF}$, $\overrightarrow{OG}$, $\overrightarrow{OH}$.

Thus, the number of rays in the figure is 8.

********** END **********