

Class: IX

Subject: Mathematics

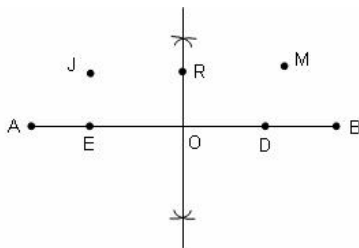
Topic: Construction

No. of Questions: 20

Duration: 60 Min

Maximum Marks: 60

1. AB is a line segment of a given measure. Which of the following points lies on the perpendicular bisector of AB?



- A. J
B. E
C. M
D. R

Ans. D

Right Answer Explanation:

The perpendicular bisector of a line segment is a line segment that falls perpendicularly on the midpoint of the line segment. Therefore, point R lies on the perpendicular bisector of AB.

2. In the given figure, PQ is a line segment of a given measure. The perpendicular bisector of PQ will pass through the point(s) ____.



- A. A and C
B. C only
C. B only

D. A only

Ans. C

Right Answer Explanation:

Perpendicular bisector of PQ will pass through point B as perpendicular bisector passes through the mid-point of the line segment, and B is the mid-point of line segment PQ.

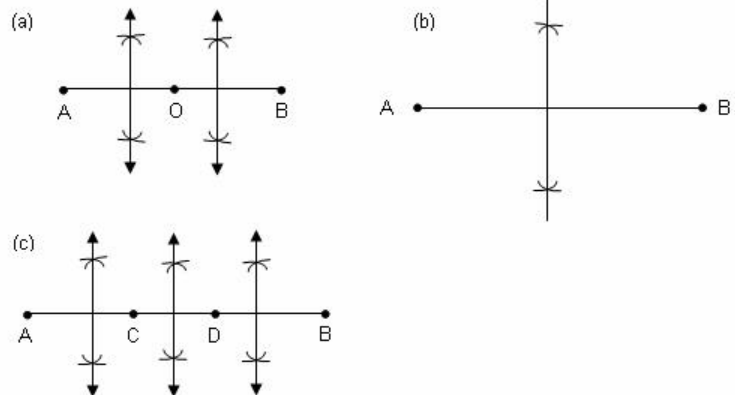
3. Which of the following figures show (s) the perpendicular bisector of a line segment AB?

A. (a) and (b)

B. (b) and (c)

C. (c) only

D. (b) only



Ans. B

Right Answer Explanation:

Perpendicular bisector is the line, which falls perpendicularly on the mid-point of the line segment

4. In the given figure, MN is a perpendicular bisector of PQ.

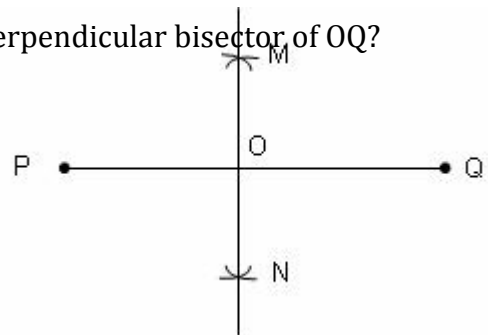
Which line segment will be intersected by the perpendicular bisector of OQ?

A. OP

B. OQ

C. OM

D. MN



Ans. B

Right Answer Explanation:

The perpendicular bisector of OQ will intersect OQ because perpendicular bisector of OQ will pass through the mid-point of OQ

5. Mukesh constructed a line segment of 32 cm and divided it into four equal parts. The measure of the length of each part is ____.
- A. 4 cm
 - B. 8 cm
 - C. 16 cm
 - D. 28 cm

Ans. B

Right Answer Explanation:

The line segment of 32 cm is divided into four equal parts. Then, the length of each

$$\text{part} = \frac{32}{4} = 8 \text{ cm}$$

6. During construction, while drawing a perpendicular bisector of a line segment, which of the following instruments is/are not used?
- A. Ruler
 - B. Protractor
 - C. Compass
 - D. Ruler and protractor

Ans. B

Right Answer Explanation:

Protractor is not used while drawing a perpendicular bisector of a line segment.

7. PR is a line segment of a given measure. The perpendicular bisector of PR divides the line segment into ____.
- A. 3 portions
 - B. 2 portions
 - C. 4 portions
 - D. none of these

Ans. B

Right Answer Explanation:

The perpendicular bisector is a line segment, which divides the line segment into two equal portions.

8. In the given figure, the perpendicular bisectors of the given line segments AO and AB are drawn. Which of the following points are equidistant from point O?
- D and P
 - E and B
 - D, E and F
 - P and Q

Ans. D

Right Answer Explanation:

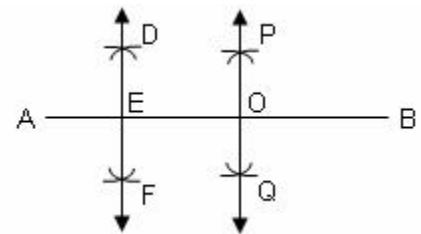
The points P and Q are equidistant from O, because they are the points of intersection of arcs drawn from A and B on both sides of AB.

9. Which of the following options is a property of the perpendicular bisector of a line segment?
- It bisects the line into two portions.
 - It makes perpendicular on line segment.
 - It intersects the line segment only.
 - It falls perpendicularly at the mid-point of a line segment.

Ans. D

Right Answer Explanation:

The perpendicular bisector is a line segment, which falls perpendicularly at the mid-point of the line segment.



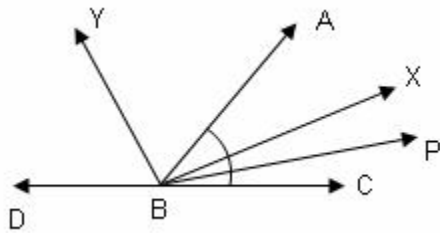
10. How many perpendicular bisectors of a line segment can be drawn?
- Infinite
 - One
 - Two
 - Three

Ans. B

Right Answer Explanation:

Only one perpendicular bisector of a line segment can be drawn.

11. In the given figure, which rays represents the angle bisector of $\angle ABC$?



- A. BY
 - B. BX
 - C. BP
 - D. BA
- Ans. B

Right Answer Explanation:

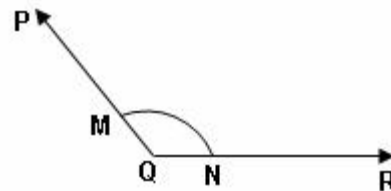
BX is the angle bisector of angle $\angle ABC$.

12. PQR is an angle of a given measure.

In order to make an angle bisector of $\angle PQR$, from which two points will you cut the arcs?

- A. P, M
- B. M, N
- C. Q, N
- D. M, Q

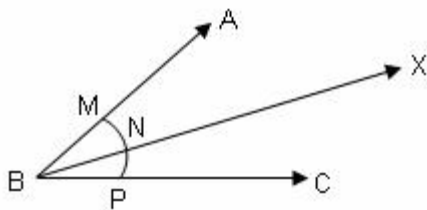
Ans. B



Right Answer Explanation:

The intersecting point of the arcs, drawn from M and N, will be joined with Q in order to get an angle bisector of $\angle PQR$.

13. In the figure, BX is an angle bisector of $\angle ABC$. The angle bisector of $\angle ABX$ will pass through.
- arc NP
 - arc MN
 - arc MB
 - arc PB



Ans. B

Right Answer Explanation:

The angle bisector of $\angle ABX$ will pass through the arc MN, as it is the arc of $\angle ABX$.

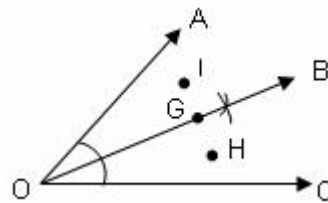
14. Which point (s) lie (s) on an angle bisector of a given angle?

- G only
- I only
- H only
- G, H and I

Ans. A

Right Answer Explanation:

OB is the angle bisector of $\angle AOC$, and point G lies on it.



lies on

15. Ashok constructed an angle of measure x° . He had also drawn an angle bisector of this angle. What will be the measure of each part of the angle bisector?

A. $(\frac{x}{4})^\circ$

B. $2x^\circ$

C. $(\frac{x}{2})^\circ$

D. $(\frac{x}{3})^\circ$

Right Answer Explanation: C

The angle bisector is a ray, which divides the angle into two equal angles. So, the

measure of angle of each part of bisector will be $(\frac{x}{2})^\circ$.

16. Which of the following diagrams show an angle bisector of a given angle?

A. (a), (b)

B. (b), (c)

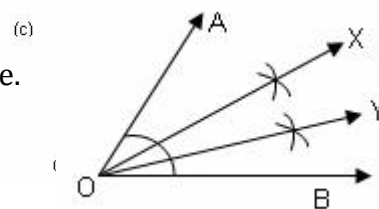
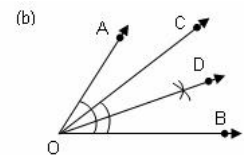
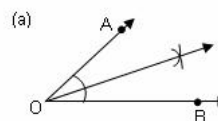
C. (a), (c)

D. (a), (b), (c)

Ans. D

Right Answer Explanation:

The angle bisector is a ray, which bisects the angle. figure (a), (b) and (c) show the angle bisector of given angle.



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the

17. In the figure, bisector of an angle is drawn.

The measure of angle $\angle YOB$ is

A. $\frac{1}{2} \angle AOB$

B. $\frac{1}{2} \angle XOB$

C. $\angle AOY$

D. $2\angle XOB$

Ans. B

Right Answer Explanation: B

OY is the angle bisector of $\angle XOB$.

$$\Rightarrow \angle YOB = \frac{1}{2} \angle XOB$$

18. In the following figure, identify the angle bisector rays.

A. Ray OX

B. Ray OA

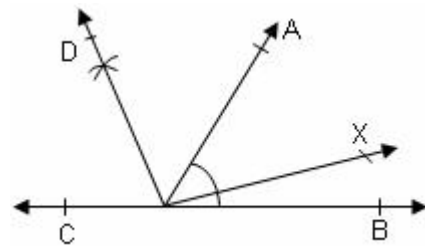
C. Ray OD

D. Ray OD, OX

Ans. C

Right Answer Explanation:

Ray OD is the angle bisector of $\angle AOC$.



19. Which of the following is a property of an angle bisector of an angle?

- A. It divides the angle in any proportion.
- B. It bisects the angle in 1: 1.**
- C. It always divides the angle in ratio 1: 2.
- D. It does not intersect the angle.

Ans. B

Right Answer Explanation:

The angle bisector of an angle divides the angle into two equal halves.

∴ It bisects the angle in ratio 1: 1.

20. How many angle bisectors of a given angle can be drawn?

- A. Infinite
- B. Two
- C. One**
- D. Zero

Ans. C

Right Answer Explanation:

There can be only one angle bisector of a given angle.