

10th Geometry Topic: Construction

1. Division of a line segment in a given ratio (internally)

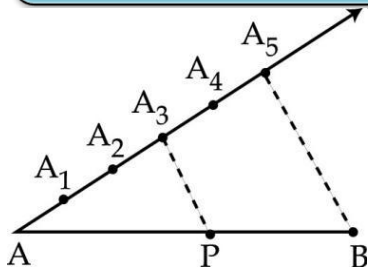
2. Tangent to a circle from a point outside it.

3. Construction of a triangle similar to a given triangle.

Practice paper based on CBSE Question Paper SA-II -2011- 2012 For Exam 2013-14

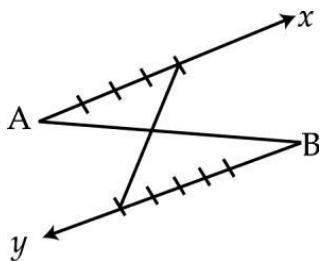
1 mark Questions

- Q. To divide a given line segment AB at a point P such that $AP : AB = 2 : 5$, the line is to be divided in the ratio :
- (A) 2 : 3 (B) 3 : 2 (C) 2 : 5 (D) 5 : 2
- Q. To draw two tangents to a circle inclined at an angle of 40° it is necessary to draw tangents at the end points of two radii, inclined to each other at an angle of
- (A) 120° (B) 60° (C) 50° (D) 140°
- Q. To draw a pair of tangents to a circle which are inclined to each other at an angle of 30° , it is required to draw tangents at end points of two radii of the circle, the angle between which should be : (A) 30° (B) 60° (C) 120° (D) 150°
- Q. The ratio of division of the line segment AB by the point P from A is :
- (A) 3 : 2 (B) 2 : 3 (C) 3 : 5 (D) 2 : 5



Q. In figure, P divides AB internally in the ratio :

- (A) 4 : 9 (B) 4 : 5 (C) 5 : 9 (D) 5 : 4



Q. To find a point P on a line segment AB such that $AP/AB = 3/7$ the segment AB is to be divided in the ratio :

- (A) 3 : 7 (B) 7 : 3 (C) 4 : 3 (D) 3 : 4

Q. To divide a line segment AB in the ratio 3 : 7, first a ray AX is drawn so that angle BAX is an acute angle and then at equal distances point are marked on the ray AX such that the minimum number of these point is

- (a) 3 (b) 10 (c) 7 (d) 12

Q. To divide a line segment AB in the ratio 4 : 5, first a ray AX is drawn first such that angle BAX is an acute angle and then points A1, A2, A3, are located at equal distances on the ray AX and the point B is joined to

- (a) A4 (b) A5 (c) A10 (d) A9

Q. To divide a line segment AB in the ratio 4 : 5, first a ray AX is drawn first such that angle BAX is an acute angle, then draw a ray BY parallel to AX and the points A1, A2, A3, And B1, B2, B3, ... are located at equal distances on the ray AX and BY respectively, then the points joined are

- (a) A5 and B6 (b) A6 and B5 (c) A4 and B5 (d) A5 and B4

Q. To construct a triangle similar to a given $\triangle ABC$ with its sides $\frac{4}{3}$ of the corresponding sides of $\triangle ABC$, first draw a ray BX such that angle CBX is an acute angle and X lies on the opposite side of A with respect to BC . The minimum number of points to be located at equal distances on ray BX is

- (a) 3 (b) 4 (c) 7 (d) none of these

Q. To draw a pair of tangents to a circle which are inclined to each other at an angle of 30° , it is required to draw tangents at end points of those two radii of the circle, the angle between them, should be

- (a) 150° (b) 90° (c) 60° (d) 120°

8. To draw a pair of tangents to a circle which are inclined to each other at an angle of 60° , it is required to draw tangents at end points of those two radii of the circle, the angle between them, should be

- (a) 150° (b) 90° (c) 60° (d) 120°

3 marks Question

Q. Construct a triangle with sides 5 cm, 6 cm and 7 cm and then construct another triangle whose sides are $\frac{3}{5}$ times the corresponding sides of the first triangle.

Q. Draw a $\triangle ABC$ with sides $BC = 6$ cm, $AB = 5$ cm, $\angle ABC = 60^\circ$. Construct a $\triangle AB'C'$ such that each side of $\triangle AB'C'$ is $\frac{3}{4}$ of the corresponding sides of $\triangle ABC$.

Q. Draw tangents to a circle of radius 3 cm from a point P at a distance of 5 cm from its centre.

Q. Construct an isosceles triangle whose base is 7 cm and altitude 4 cm and then construct another similar triangle whose sides are $\frac{3}{2}$ time the corresponding sides of the isosceles triangle.

Q. Construct a triangle ABC in which $BC = 13$ cm, $CA = 5$ cm and $AB = 12$ cm. Draw its incircle and measure its radius.

Q. Construct a triangle ABC in which $AB = 3$ cm, $BC = 4$ cm and $AC = 5$ cm. Draw the circumcircle of triangle ABC .