NCERT Mathematics Class 10 Exemplar Ch 10 Constructions Part 1

EXERCISE 10.1

1. To divide a line segment AB in the ratio $5:7$, first a ray AX is drawn so that $\angle BAX$ is an acute angle and then at equal distances points are marked on the ray AX such that the minimum number of these points is

(A) 8 (B) 10 (C) 11

(D) 12

Answer: D

2. To divide a line segment AB in the ratio $4:7$, a ray AX is drawn first such that ∠ BAX is an acute angle and then points $A1, A2, A3, \ldots$ are located at equal distances on the ray AX and the point B is joined to

(A) $A12$ (B) $A11$ (C) $A10$ (D) $A9$

Answer: B

3. To divide a line segment AB in the ratio $5:6$, draw a ray AX such that ∠ BAX is an acute angle, then draw a ray BY parallel to AX and the points $A1, A2, A3, \ldots$ and $B1, B2, B3, \ldots$ are located at equal distances on 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

Answer: A

4. To construct a triangle similar to a given ΔABC with its sides $\frac{3}{7}$ of the corresponding sides of ΔABC, first draw a ray BX such that ∠ CBX is an acute angle and X lies on the opposite side of A with respect to BC. Then locate points $B1, B2, B3, \ldots$ on BX at equal distances and next step is to join

(A) B10 to C (B) B3 to C (C) B7 to C (D) B4 to C

Answer: C

5. To construct a triangle similar to a given ΔABC with its sides $\frac{8}{5}$ of the corresponding sides of ΔABC draw a ray BX such that ∠ CBX is an acute angle and X is 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) 5 (B) 8 (C) 13 (D) 3

Answer: B

6. 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) $135°$ (B) $90°$ (C) $60°$ (D) $120°$

Answer: D