

EGD Grade 10

Geometric Constructions

Construct a 45° angle from a point on a line

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Geometric Constructions

Question

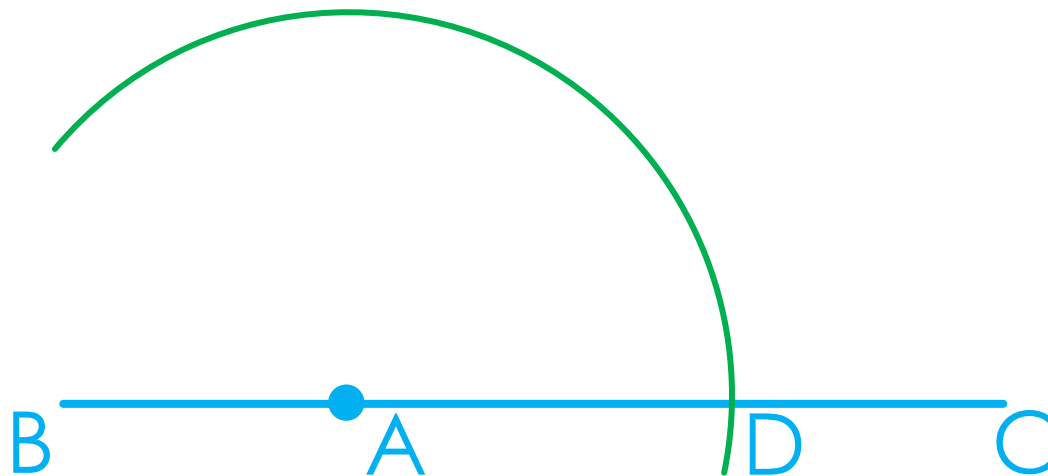
- Draw a 45° line from point A on line segment BC by means of construction



Geometric Constructions

Step 1

- **Question:** 45° line from point A
- Draw an arc of any size from A to intersect line segment BC at D



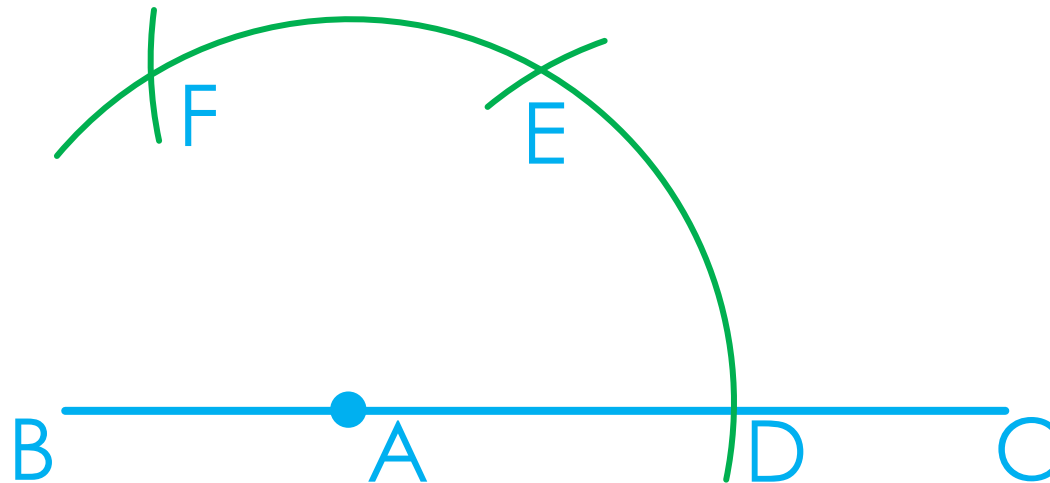
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Step 2

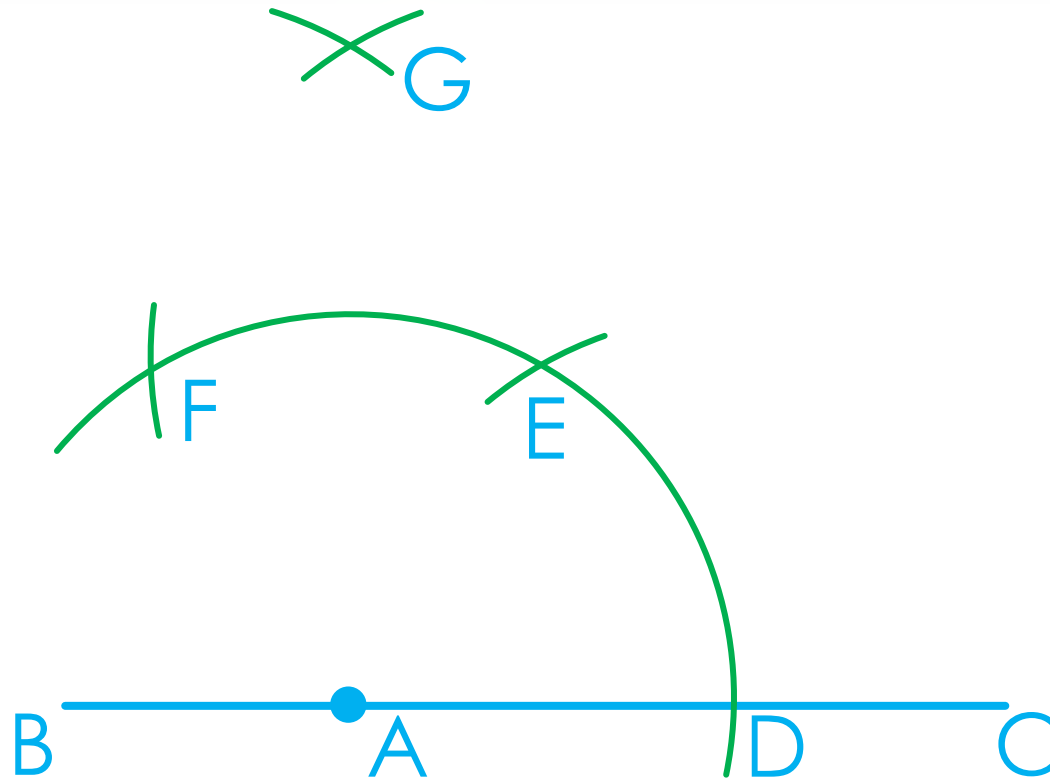
- **Question:** 45° line from point A
- At the same size as arc AD, strike two similar sized arcs from intersection point D to intersect arc AD at E and F respectively



Geometric Constructions

Step 3

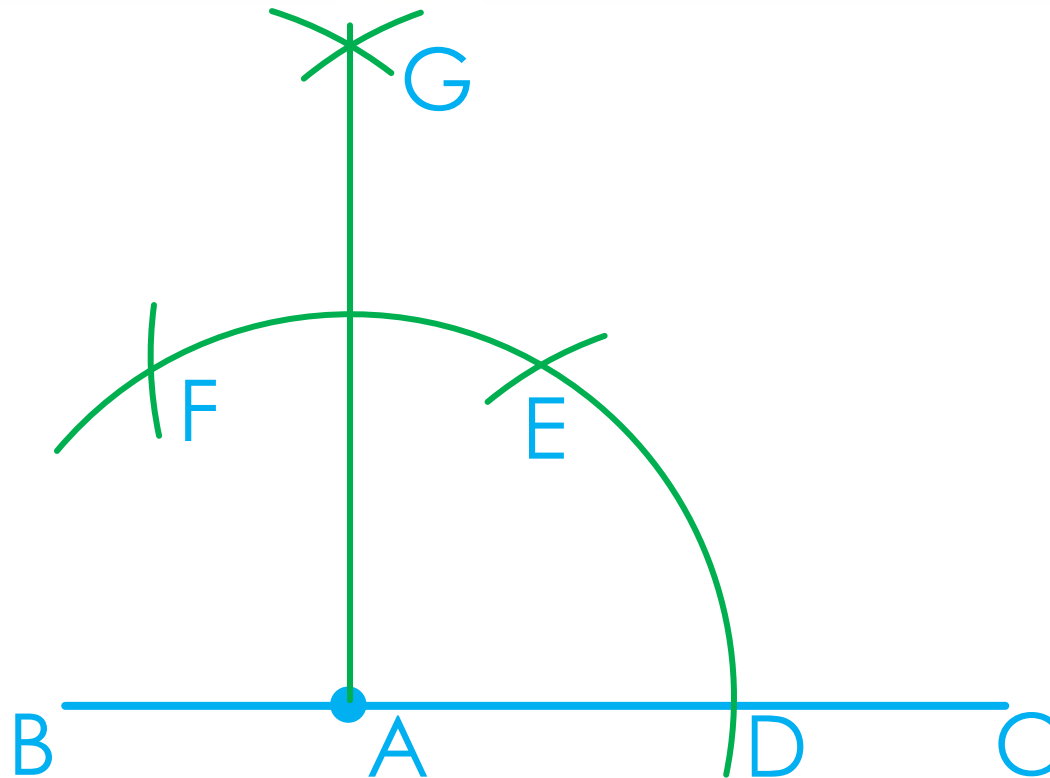
- **Question:** 45° line from point A
- Strike two similar sized arcs from intersection point E and F respectively to intersect at G



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Step 4

- **Question:** 45° line from point A
- Join point A with the intersection point at G to complete a 90° angle



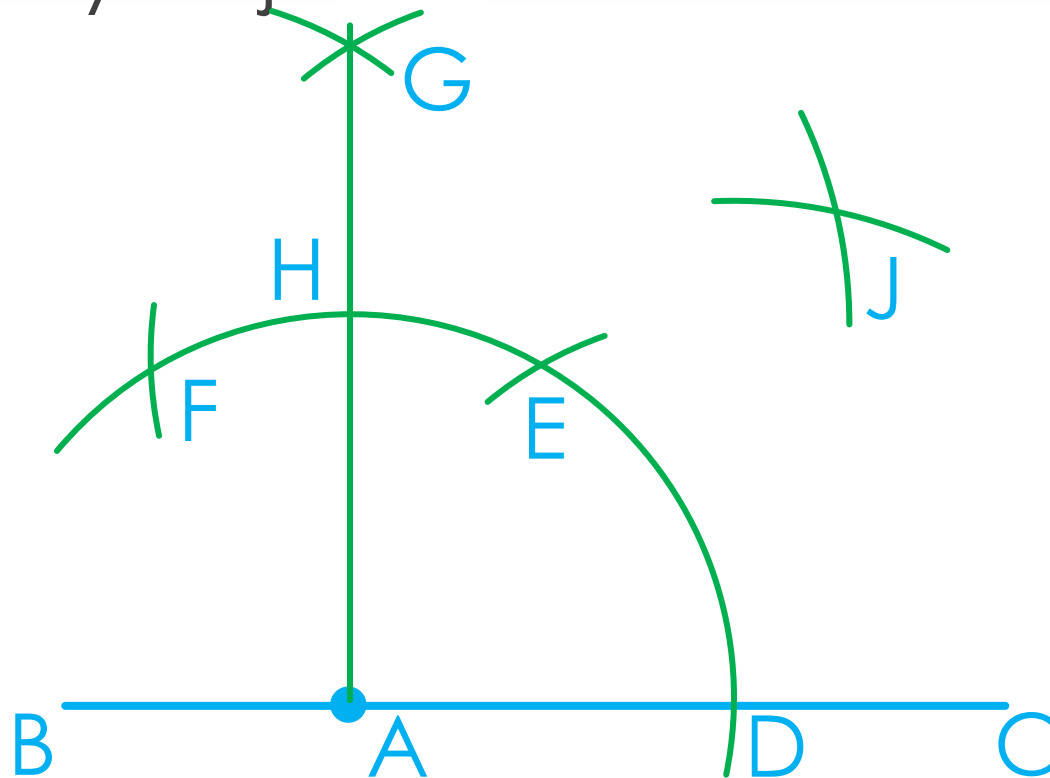
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Step 5

- **Question:** 45° line from point A
- From intersection points D and H strike two arcs of the same size from D and H respectively to join at J



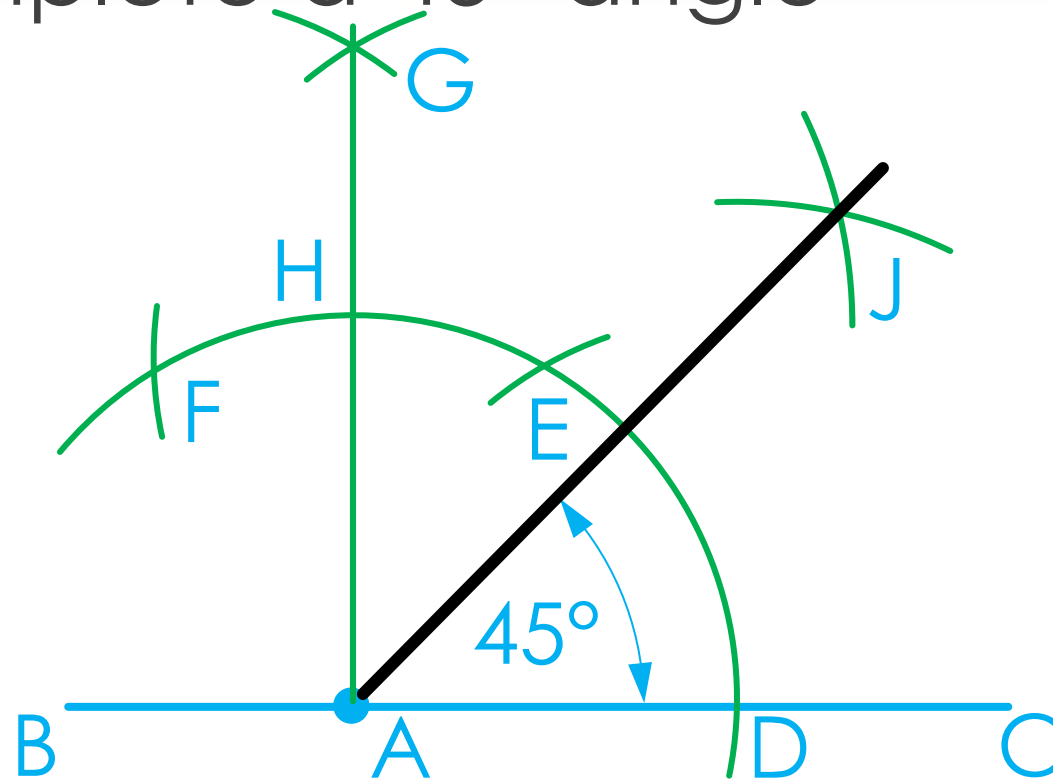
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Step 6

- **Question:** 45° line from point A
- Join point A with the intersection point at J to complete a 45° angle



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Task 1.4.3

- On the prepared A3 drawing sheet (Task 1.3.3), draw line segment AB (75mm in length).
- **Question:** Draw an angle of 45° from point A on line segment AB by means of construction.
- Show all construction lines.
- Name this task 1.4.3

