



# Constructing an Ellipse

## Four Centre Method

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education

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# Geometric Constructions

Question

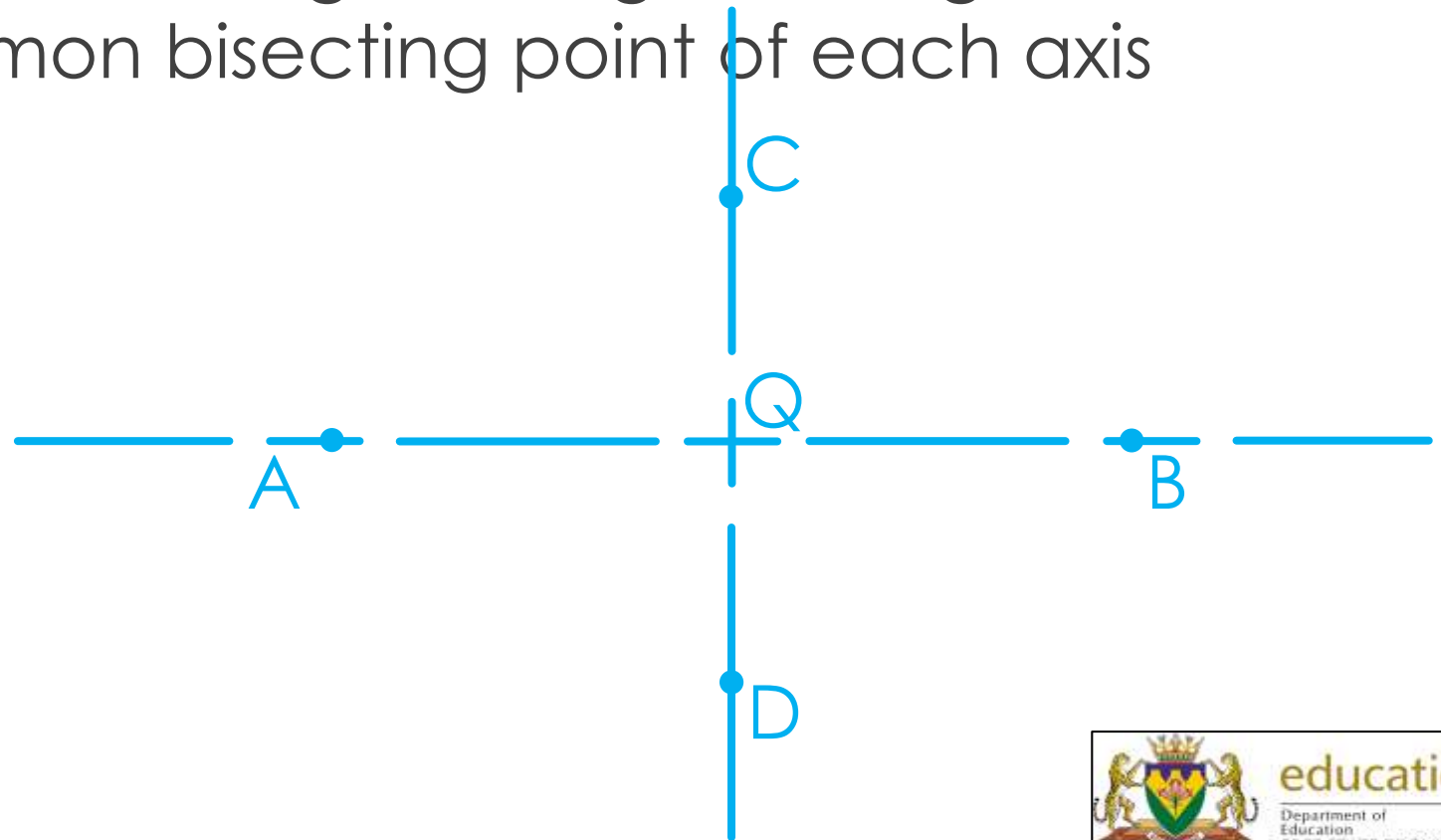
- Construct an ellipse by means of the four-centre method if the major axis is 110mm and the minor axis is 75 mm



# Geometric Constructions

Step 1

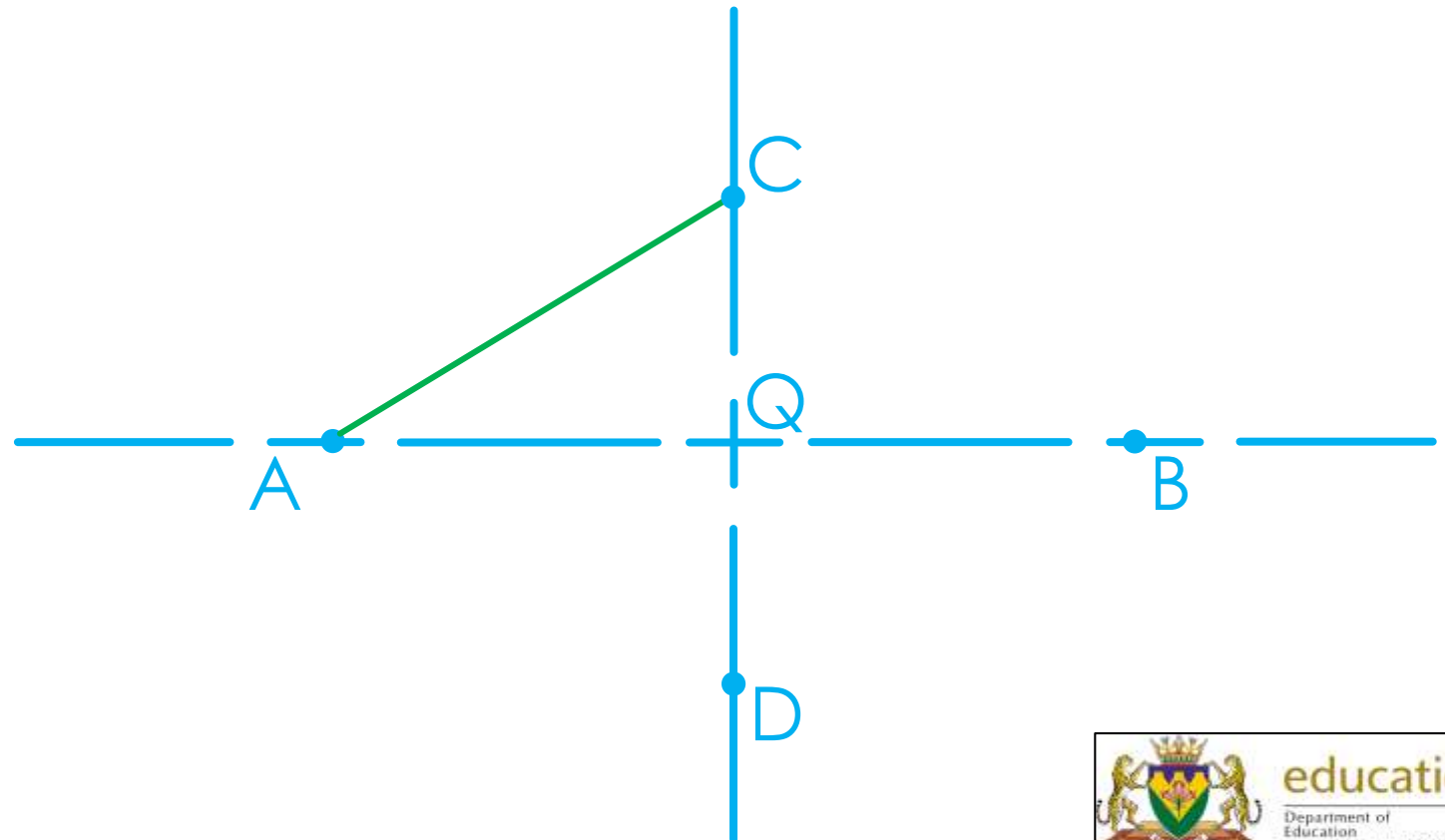
- **Question:** Construct an ellipse by means of the four centre method
- Draw the two axes according to the given lengths with point Q as the common bisecting point of each axis



# Geometric Constructions

Step 2

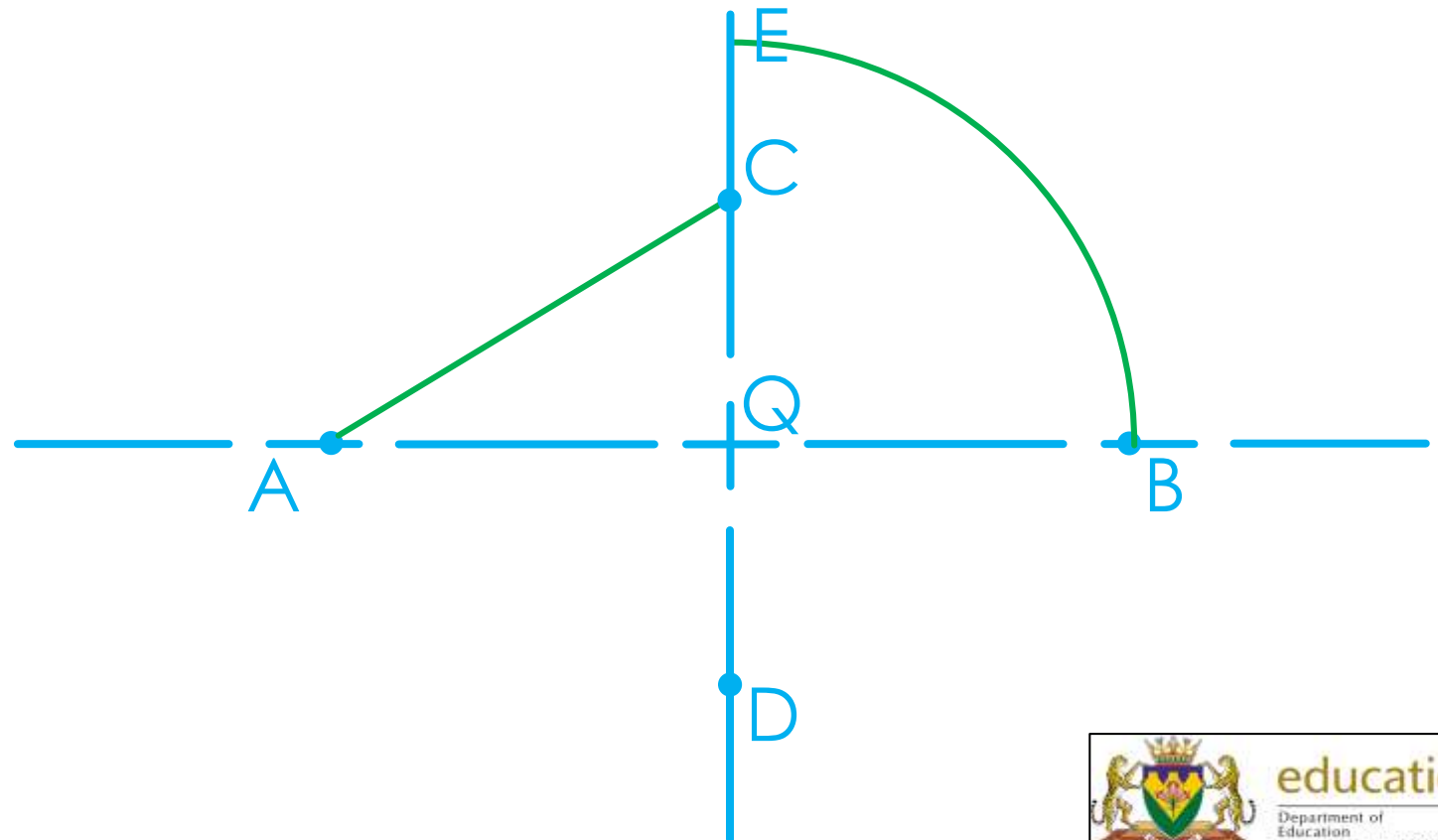
- **Question:** Construct an ellipse by means of the four centre method
- Join A and C with each other



# Geometric Constructions

Step 3

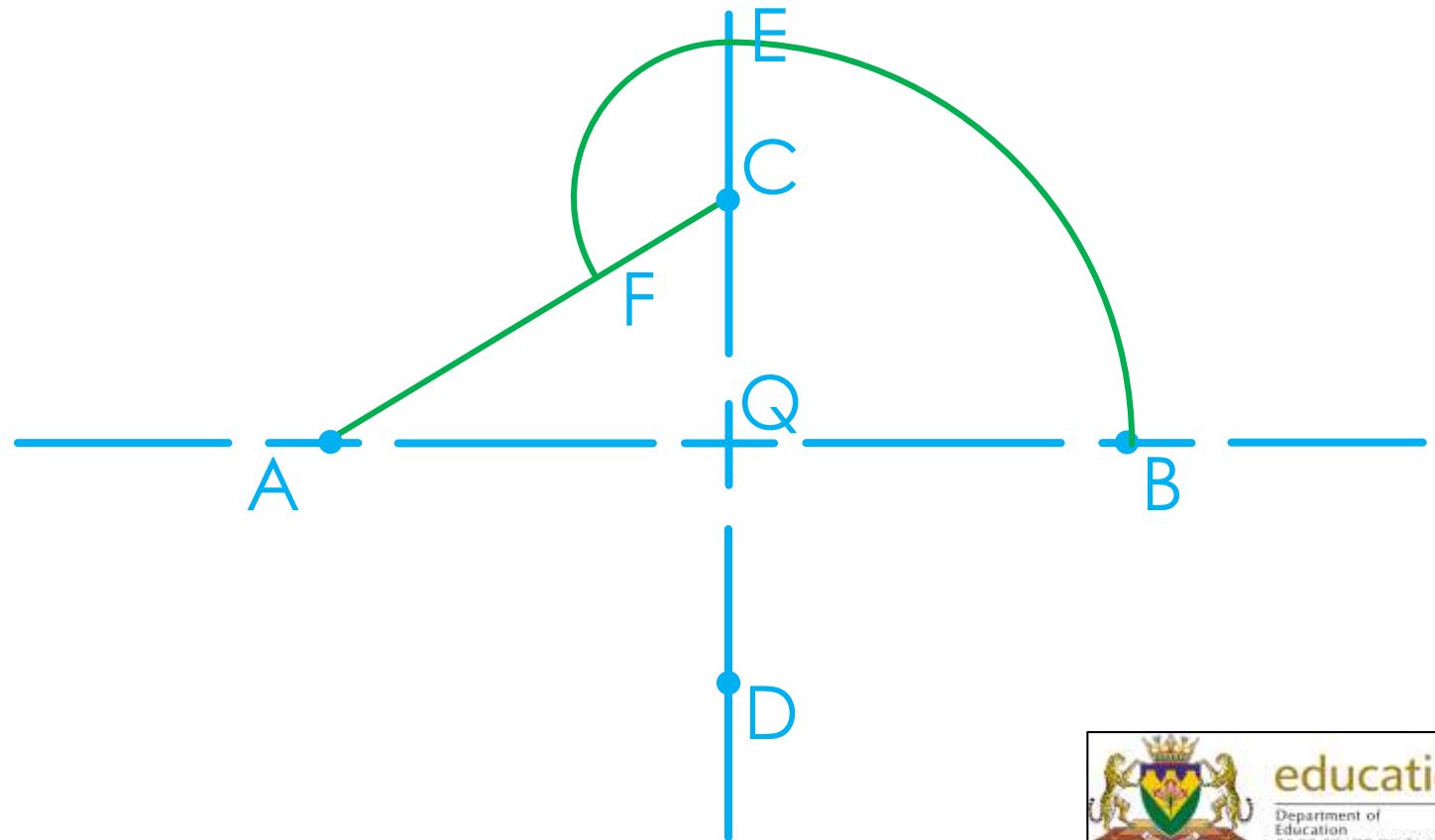
- **Question:** Construct an ellipse by means of the four centre method
- With QB as the radius draw an arc to intersect QC at E



# Geometric Constructions

Step 4

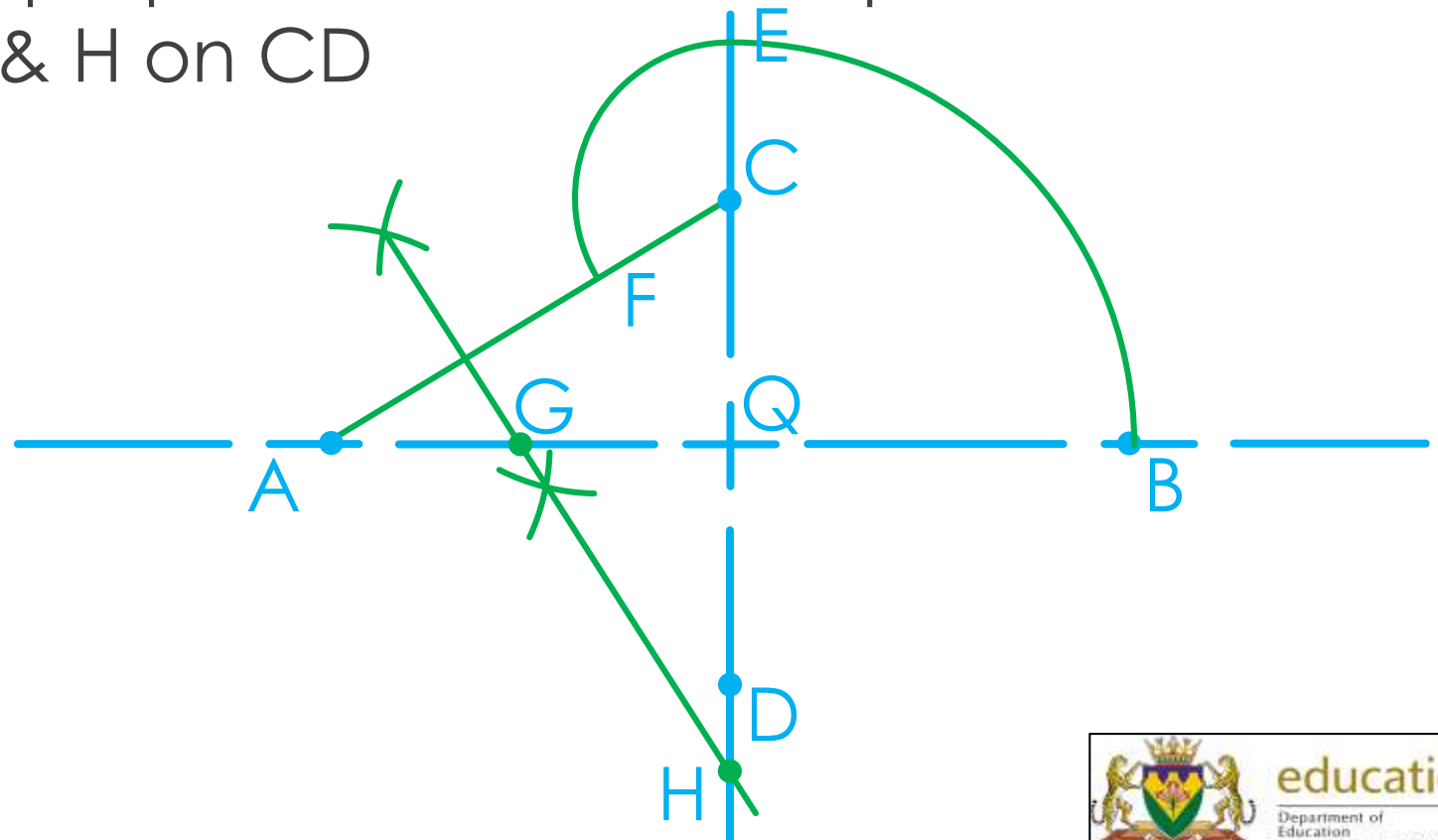
- **Question:** Construct an ellipse by means of the four centre method
- With CE as the radius draw an arc to intersect AC at F



# Geometric Constructions

Step 5

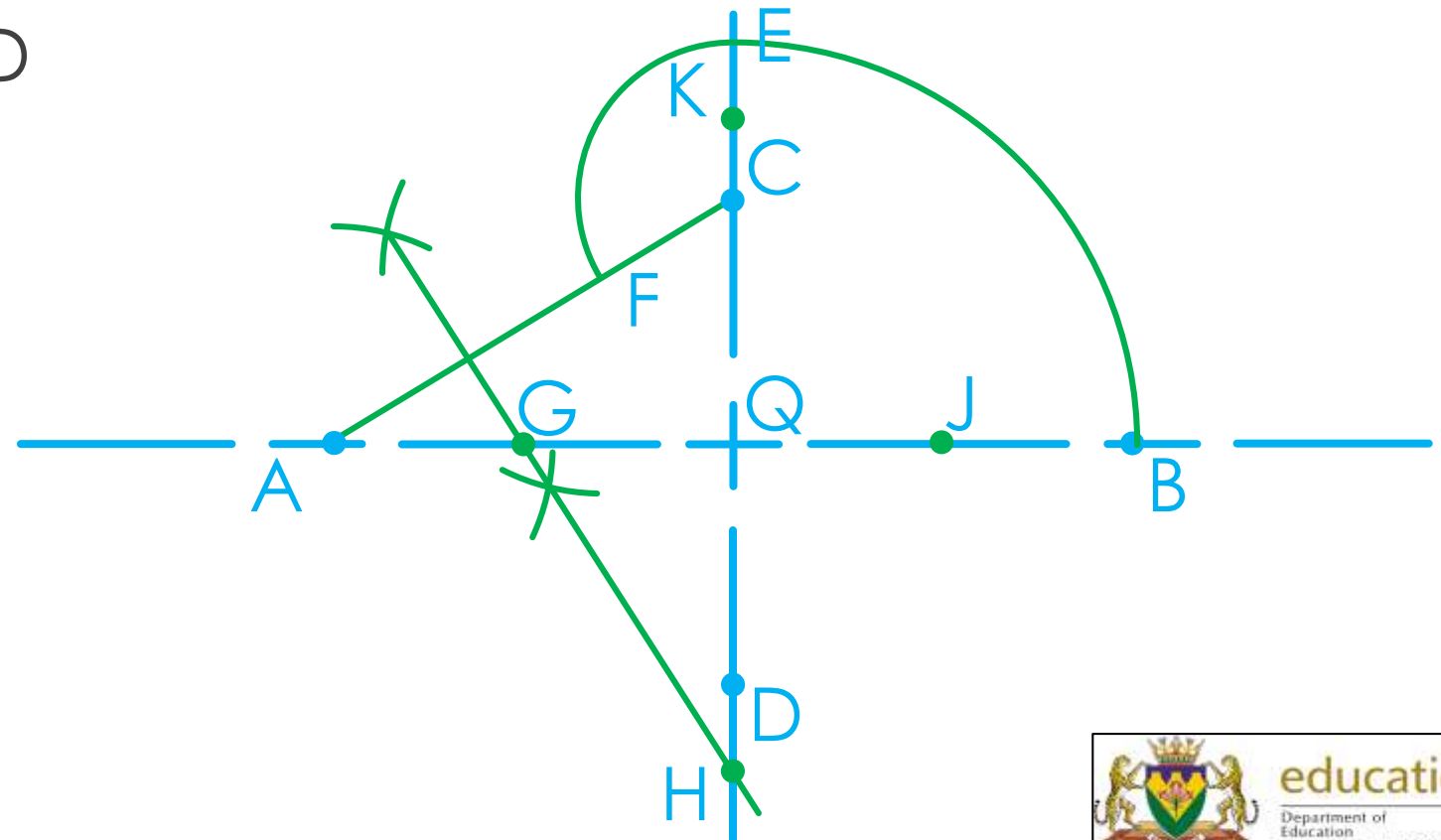
- **Question:** Construct an ellipse by means of the four centre method
- On AF construct the perpendicular bisector point to determine G on AB & H on CD



# Geometric Constructions

Step 6

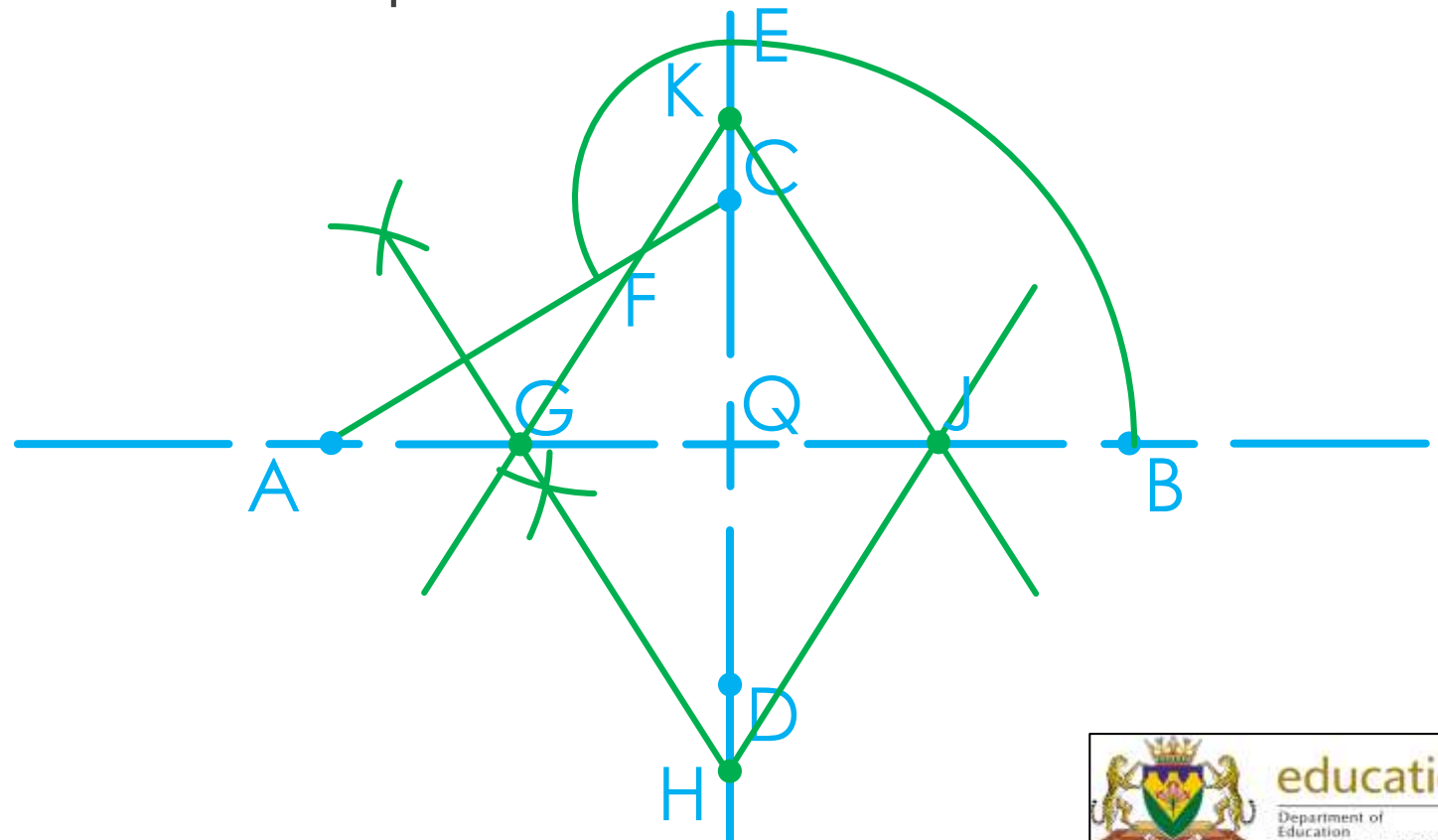
- **Question:** Construct an ellipse by means of the four centre method
- Measure GQ on AB and find JQ on AB as well as HQ on CD to find KQ on CD



# Geometric Constructions

Step 7

- **Question:** Construct an ellipse by means of the four centre method
- Use G & J and H & K as centre points to construct the ellipse

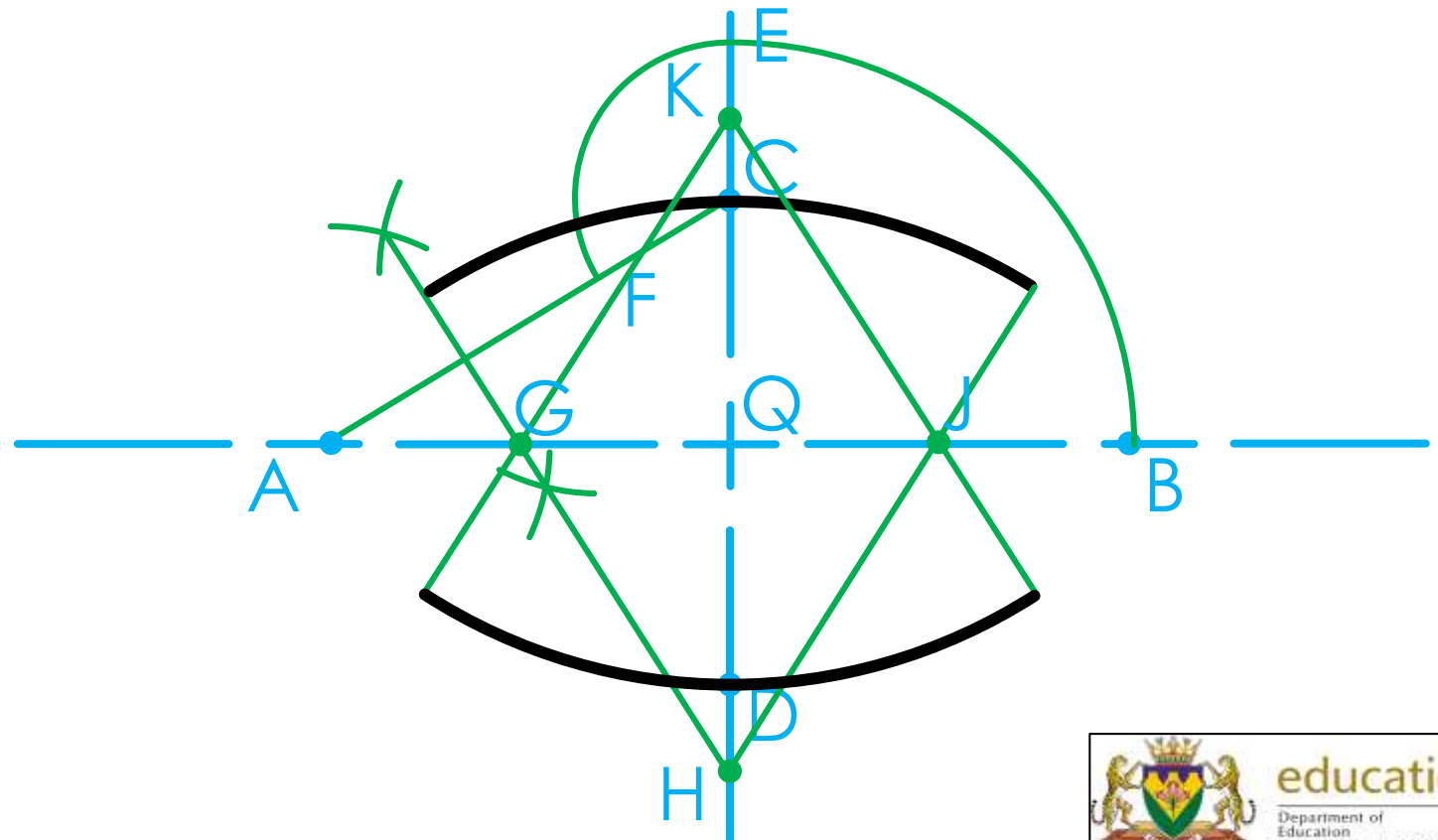




# Geometric Constructions

Step 9

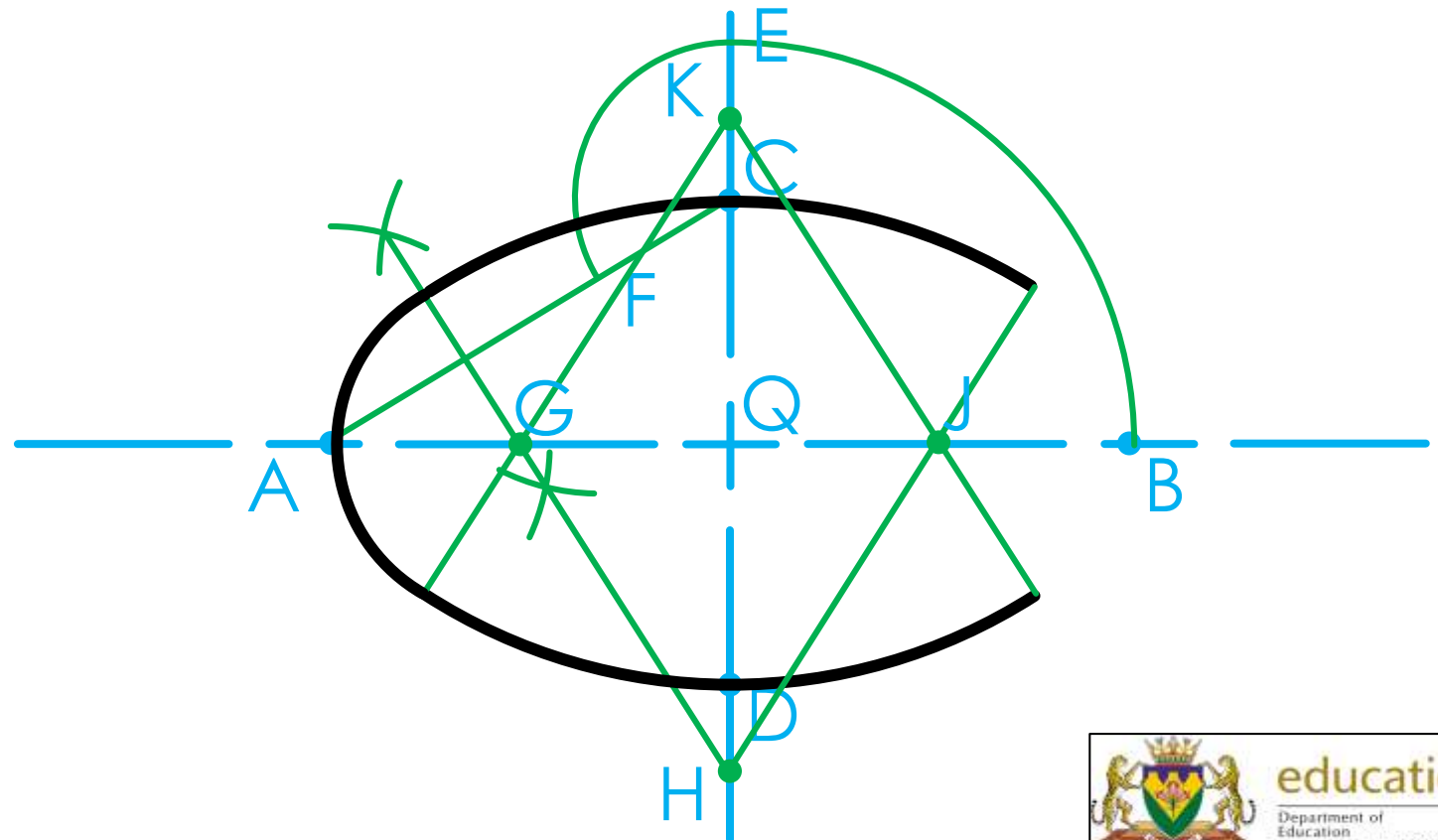
- **Question:** Construct an ellipse by means of the four centre method
- Use the length of KD to draw an arc



# Geometric Constructions

Step 10

- **Question:** Construct an ellipse by means of the four centre method
- Use the length of GA to draw an arc





# Geometric Constructions

Task 1.9.2

- On the prepared A3 drawing sheet (Task 1.9.1), draw axis (A) of 100 mm and 60 mm intersecting each the bisecting points of the axis.
- **Question: Construct an ellipse by means of the four-centre method.**
- Show all construction lines.
- Name this task 1.9.2

