



# EGD Grade 10

## Geometric Constructions

### Join an arc to straight lines

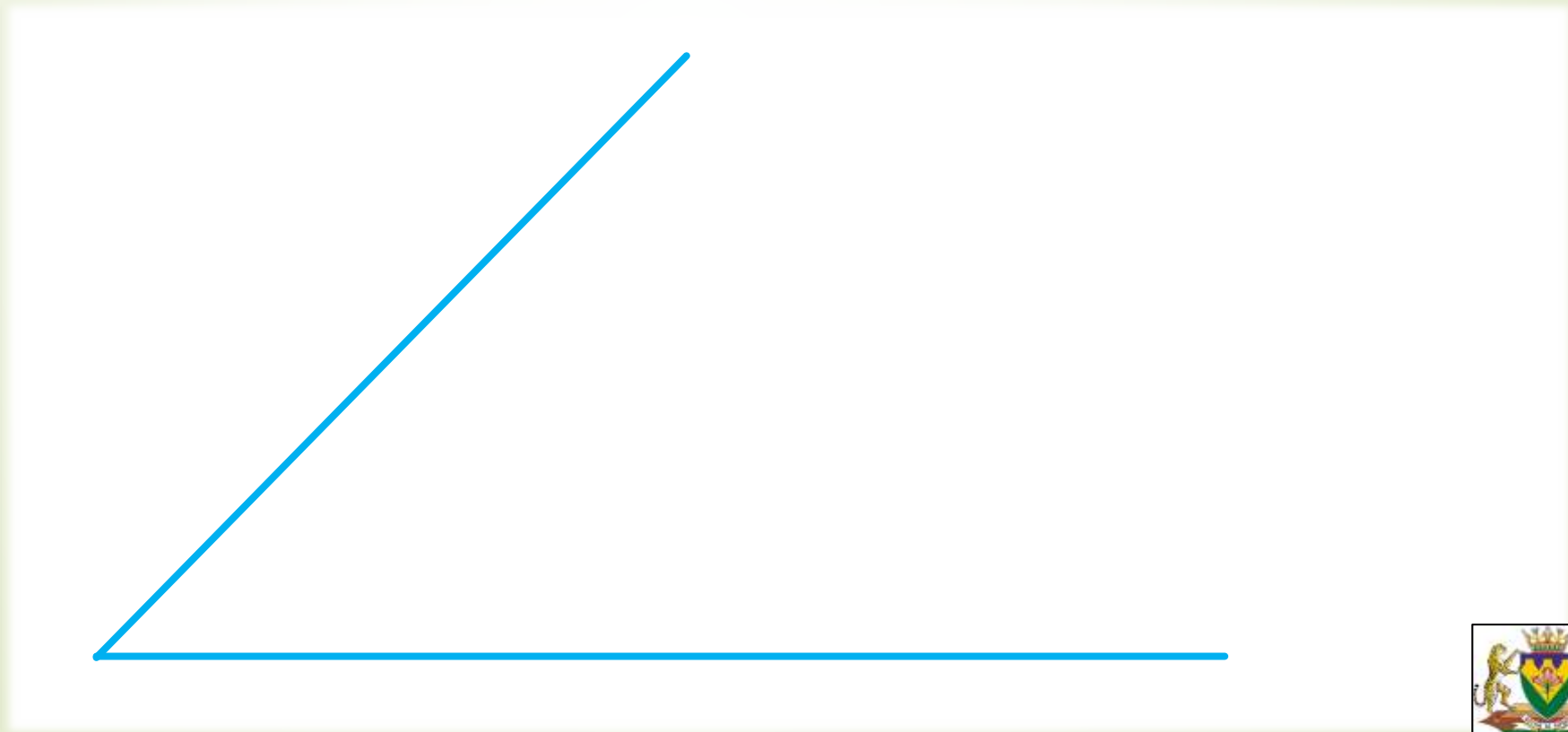
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Free State Province



# Geometric Constructions

Question

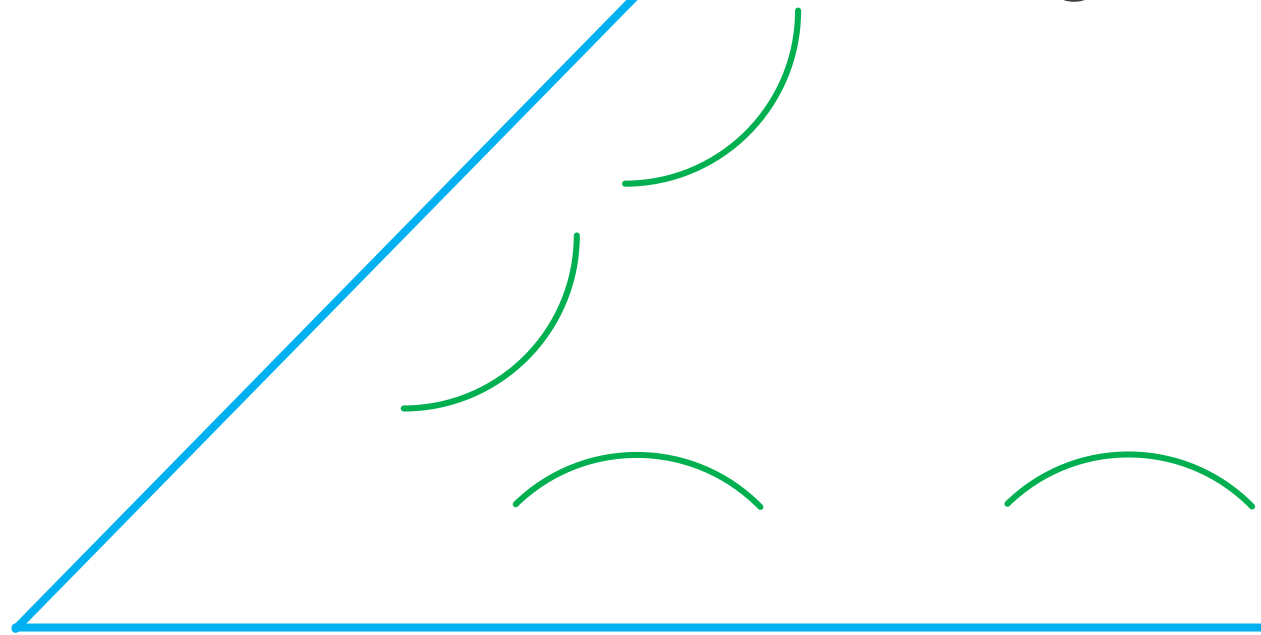
- By means of construction, join the given two straight lines with an arc of 20mm



# Geometric Constructions

Step 1

- **Question:** Draw a fillet (20mm) to an acute angle
- Set your compass on the given fillet size (20mm) and strike two arcs on each given line



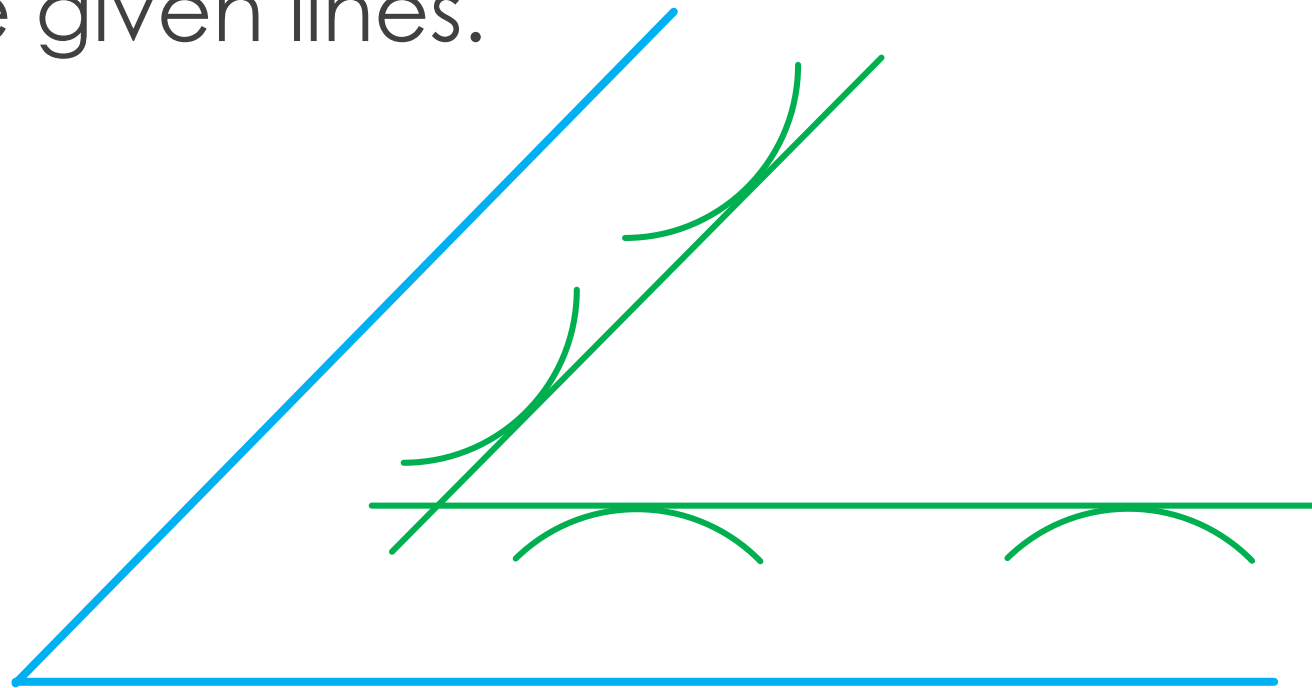
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# Geometric Constructions

Step 2

- **Question:** Draw a fillet (20mm) to an acute angle
- On the arcs, draw two tangent lines parallel to the given lines.



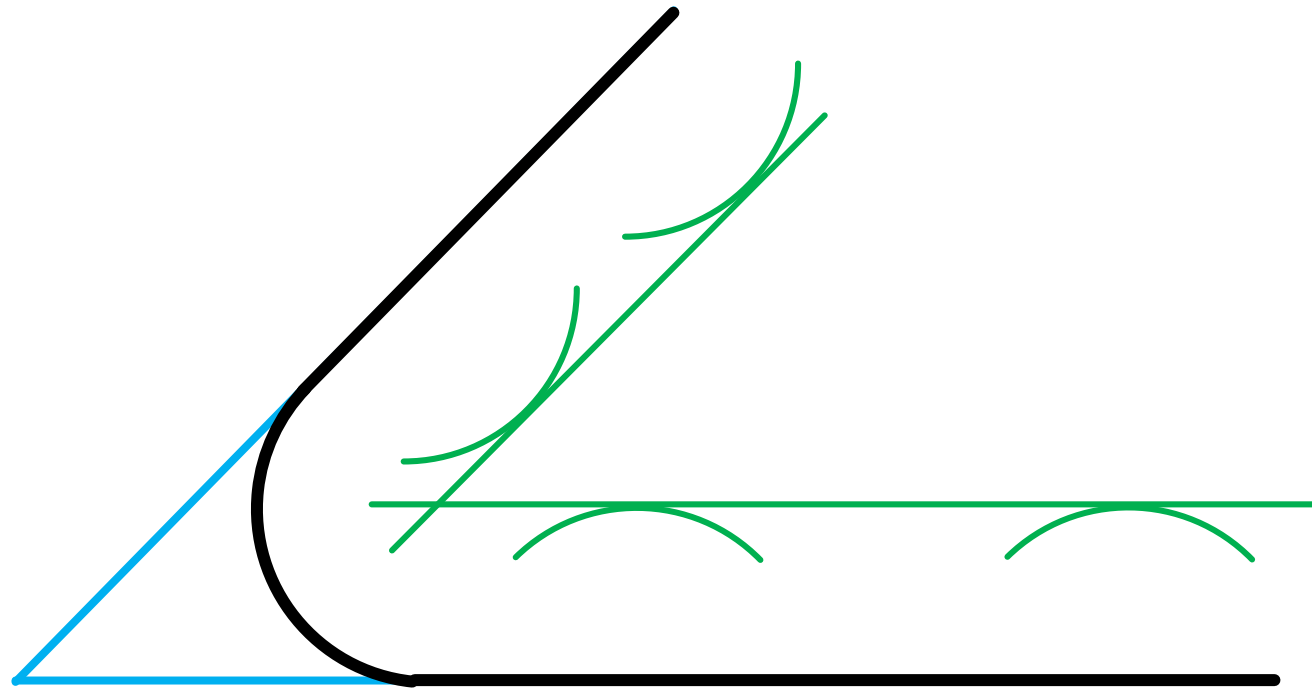
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# Geometric Constructions

Step 3

- **Question:** Draw a fillet (20m) to an acute angle
- Use the intersection point of these two lines and draw the 20mm fillet circle



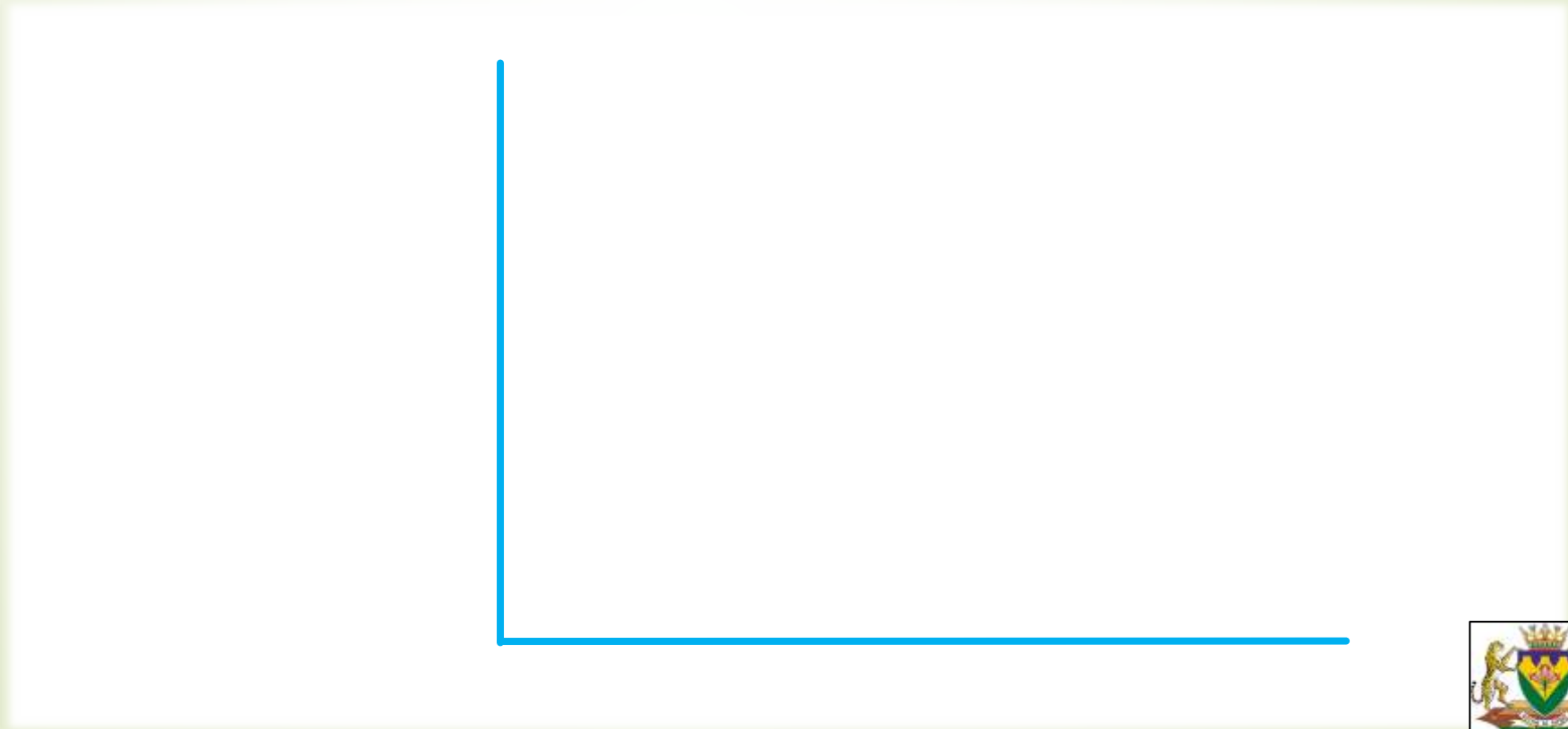
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# Geometric Constructions

Question

- By means of construction, join the given two straight lines with an arc of 20mm



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# Geometric Constructions

Step 1

- **Question:** Draw a fillet (20mm) to a 90° angle
- Set your compass on the given fillet size (20mm) and strike two arcs on each given line



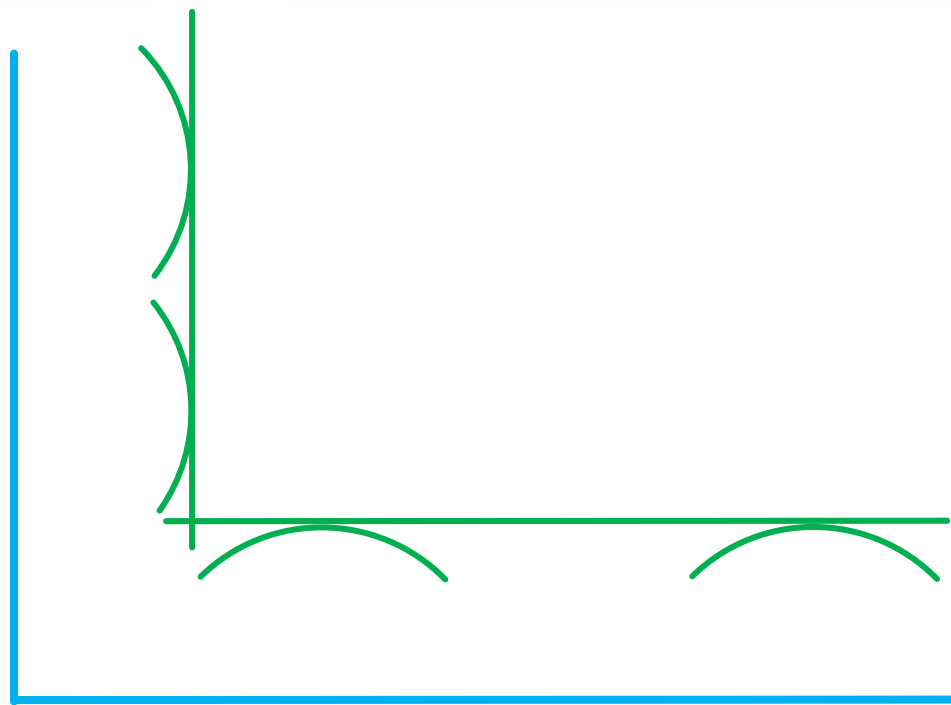
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# Geometric Constructions

Step 2

- **Question:** Draw a fillet (20mm) to a 90° angle
- On the arcs, draw two tangent lines parallel to the given lines.



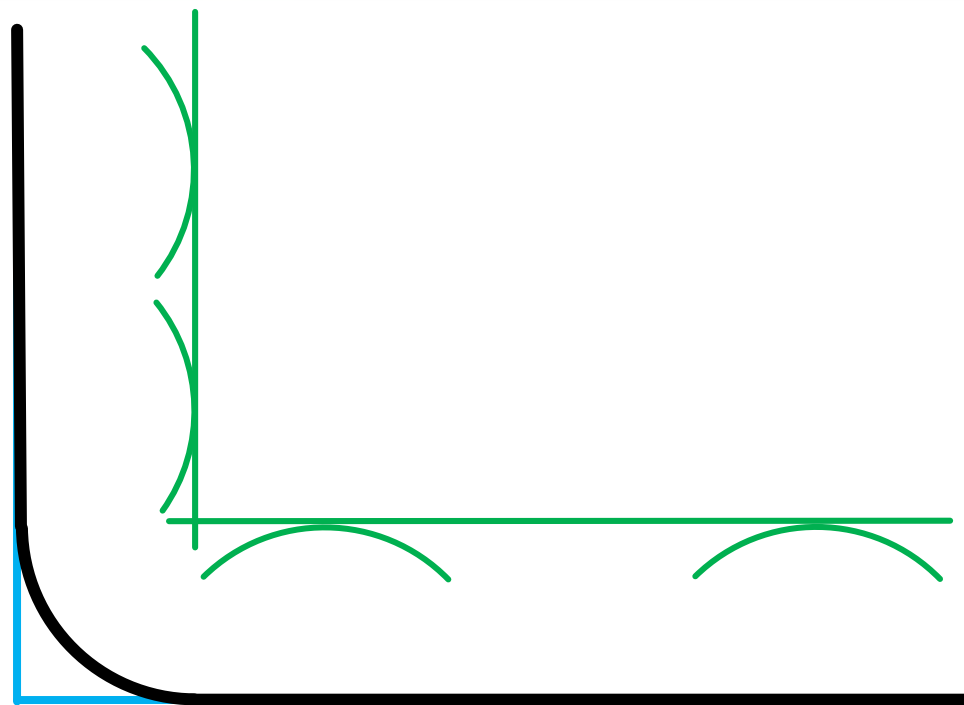
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# Geometric Constructions

Step 3

- **Question:** Draw a fillet (20m) to a 90° angle
- Use the intersection point of these two lines and draw the 20mm fillet circle



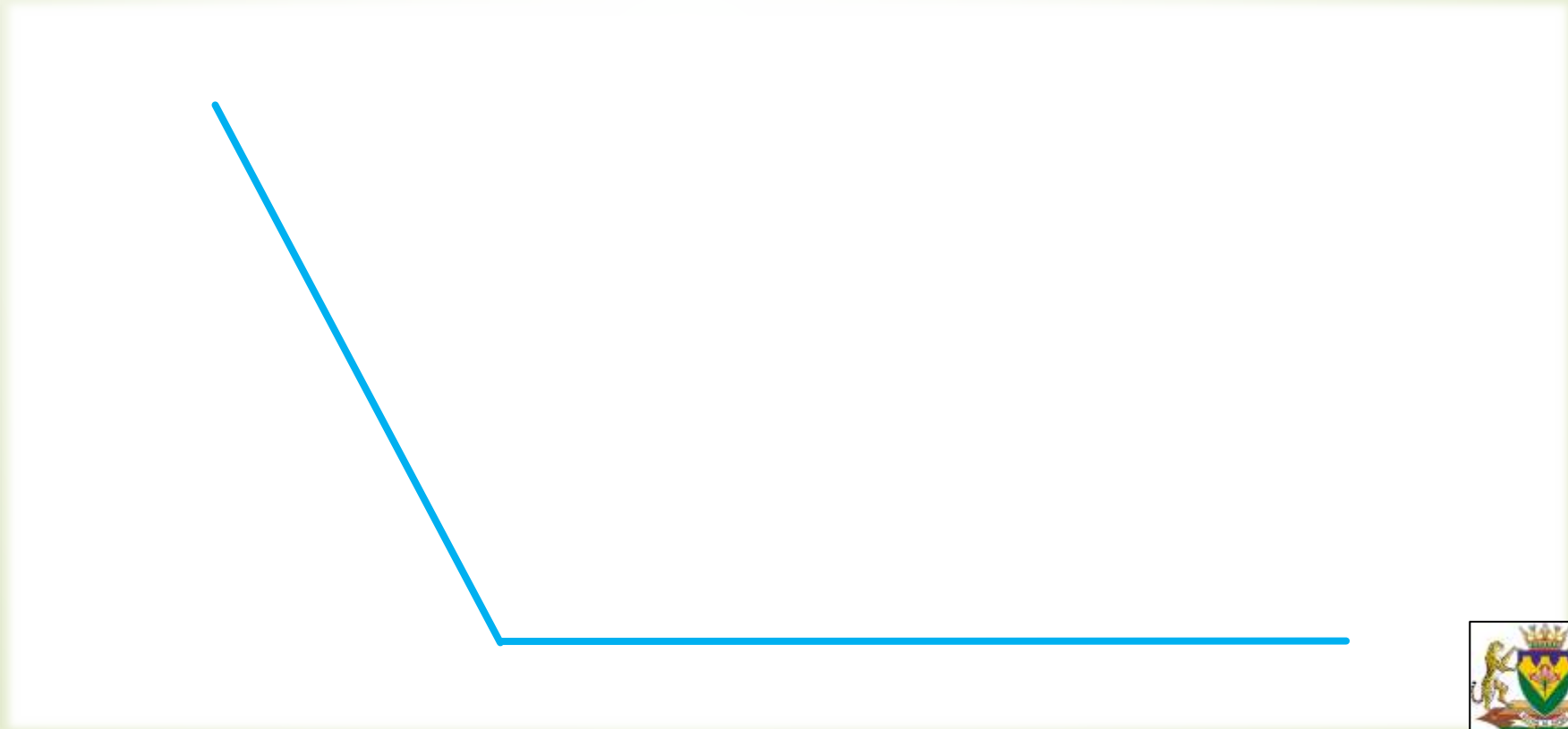
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# Geometric Constructions

Question

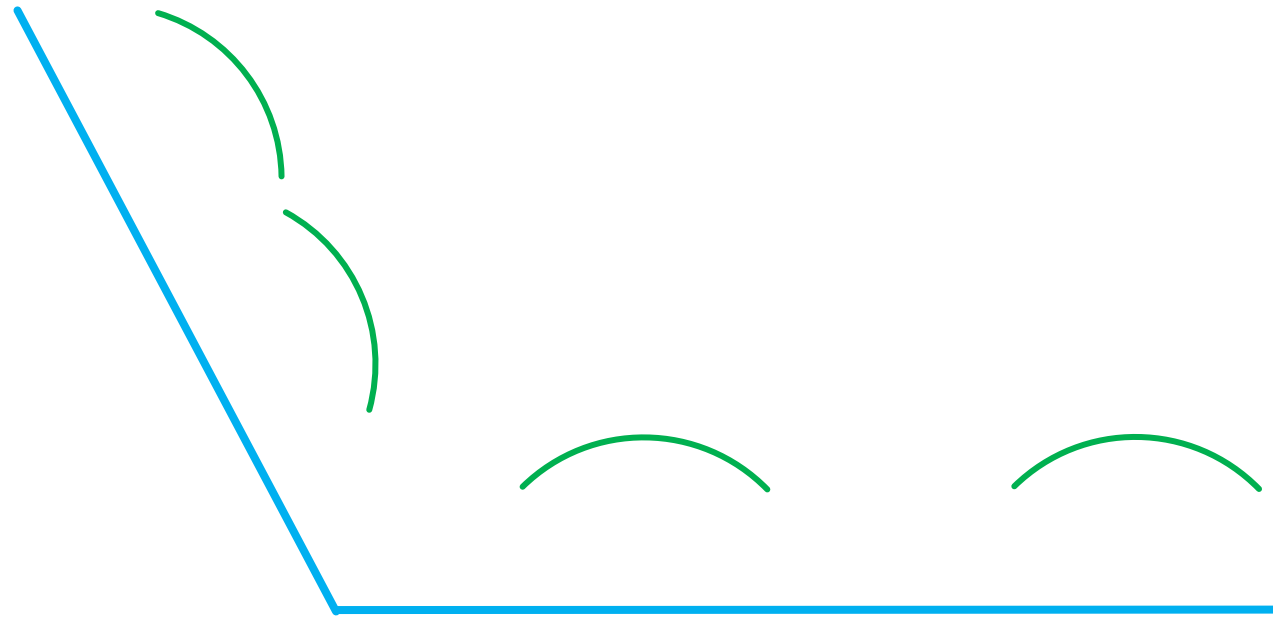
- By means of construction, join the given two straight lines with an arc of 20mm



# Geometric Constructions

Step 1

- **Question:** Draw a fillet (20mm) to an obtuse angle
- Set your compass on the given fillet size (20mm) and strike two arcs on each given line



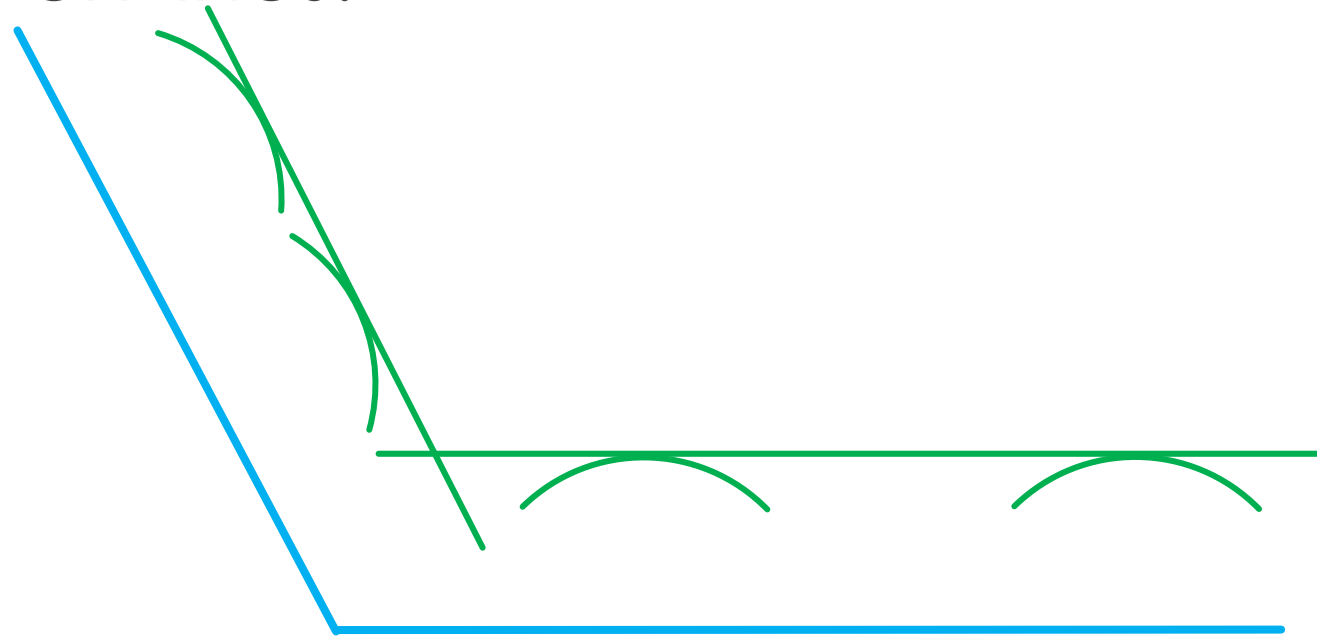
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# Geometric Constructions

Step 2

- **Question:** Draw a fillet (20mm) to an obtuse angle
- On the arcs, draw two tangent lines parallel to the given lines.



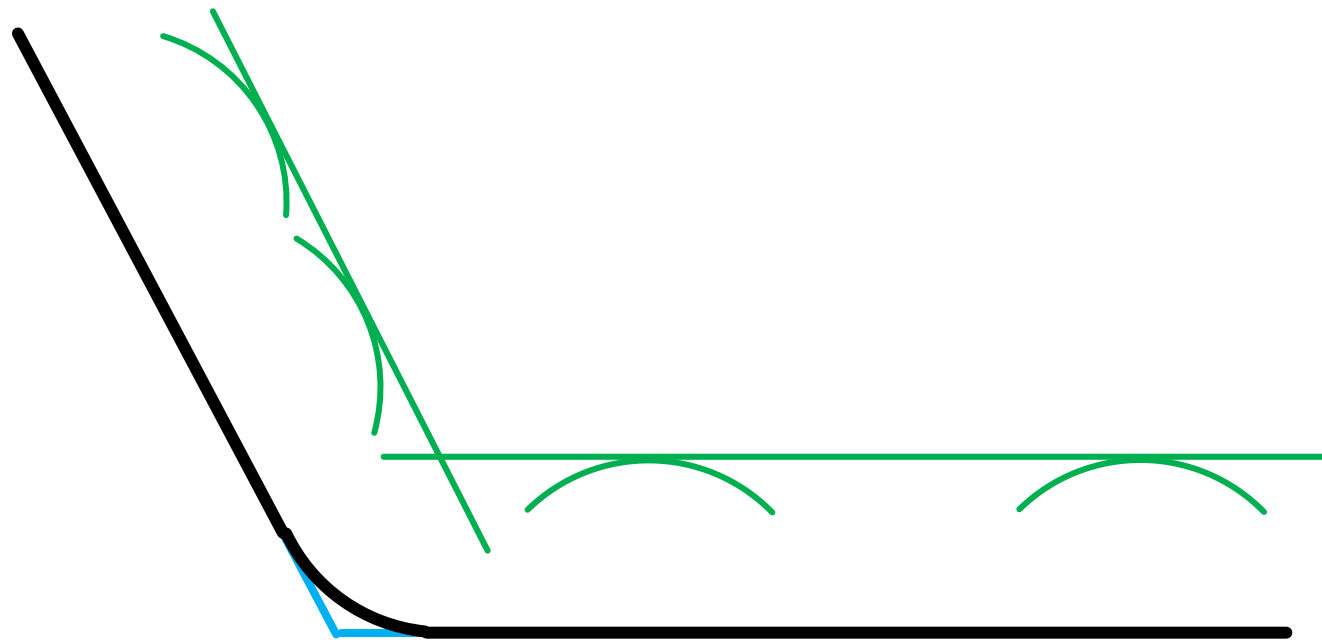
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# Geometric Constructions

Step 3

- **Question:** Draw a fillet (20m) to an obtuse angle
- Use the intersection point of these two lines and draw the 20mm fillet circle



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# Geometric Constructions

Task 1.5.3

- Set up an A3 drawing sheet with a border and a title block.
- Draw an acute angle (ABC) a  $90^\circ$  angle (DEF) and an obtuse angle (RTS).
- **Question: Draw a fillet (25mm) to an acute angle (ABC), a  $90^\circ$  (DEF) and an obtuse angle (RTS)**
- Show all construction lines.
- Name this task 1.5.3