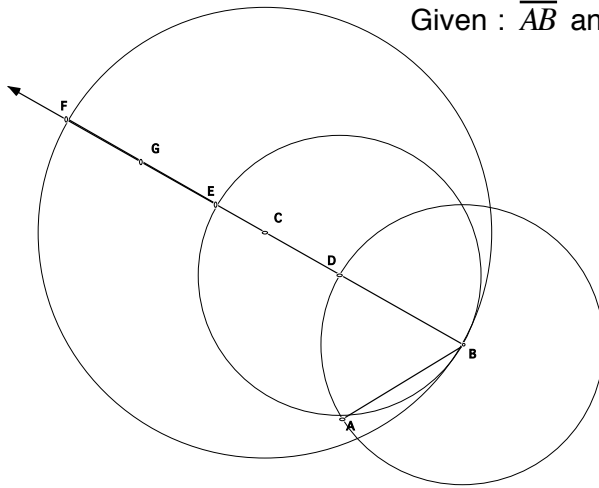


Given : \overline{AB} and Point C.

Prove : $\overline{CG} \cong \overline{AB}$



Given : Segment AB and Point C

Steps

1. Construct Circle B which creates Point D.
2. Construct Circle D which creates Point E.
3. Construct Circle C which creates Point F.
4. Construct the Midpoint of Segment FE.

Prove : Segment CG is congruent to Segment AB

1. \overline{AB} , Point C
2. Circle B, C, D \Rightarrow Points D, E, F
3. $\overline{FG} = \overline{GE}$
4. $\overline{AB} \cong \overline{BD}$
5. $\overline{BD} \cong \overline{DE}$
6. $\overline{AB} \cong \overline{DE}$
7. $\overline{CF} = \overline{CB}$
8. $\overline{ED} = \overline{EC} + \overline{CD}$
9. $\overline{CD} = \overline{ED} \cong \overline{EC}$
10. $\overline{CD} = \overline{AB} \cong \overline{EC}$
11. $\overline{FG} + \overline{GE} + \overline{EC} = \overline{CF}$
12. $\overline{FG} + \overline{GE} + \overline{EC} = \overline{CB}$
13. $\overline{GE} + \overline{GE} + \overline{EC} = \overline{CB}$
14. $2 \cdot \overline{GE} + \overline{EC} = \overline{CB}$
15. $\overline{CD} + \overline{BD} = \overline{CB}$
16. $\overline{CD} + \overline{AB} = \overline{CB}$
17. $(\overline{AB} \cong \overline{EC}) + \overline{AB} = \overline{CB}$
18. $2 \cdot \overline{AB} \cong \overline{EC} = \overline{CB}$
19. $2 \cdot \overline{AB} \cong \overline{EC} = 2 \cdot \overline{GE} + \overline{EC}$
20. $2 \cdot \overline{AB} = 2 \cdot \overline{GE} + 2 \cdot \overline{EC}$
21. $\overline{AB} = \overline{GE} + \overline{EC}$
22. $\overline{GC} = \overline{GE} + \overline{EC}$
23. $\overline{GC} = \overline{AB}$

1. Given
2. Construction of Circles
3. Construction of Midpoint
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.