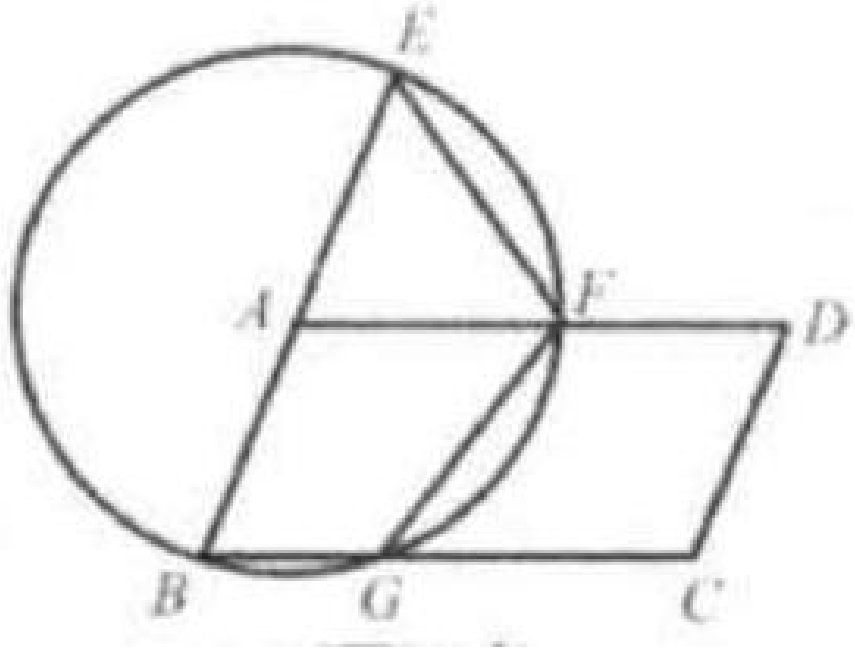
Example 4

As shown in the figure, $ABCD$ is a parallelogram. Draw a circle using A as the center and AB as the radius to meet BC at G, AD at F, and the extension of BA at E. Show that $EF = FG$.

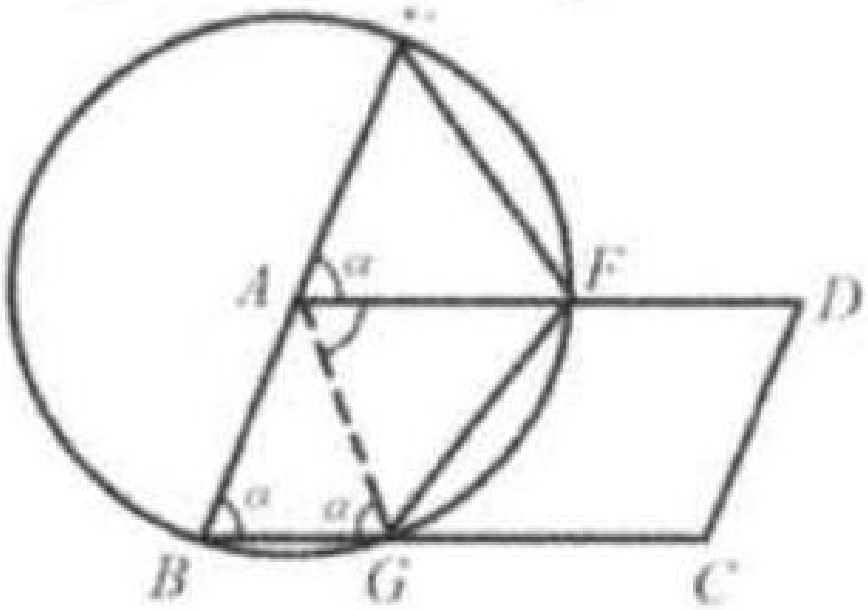
Solution: Connect AG. $AB = AG. \angle B = \angle AGB = \alpha$.

Since $BC//AD, \angle B = \angle EAF = \alpha$ and $\angle AGB = \angle GAF = \alpha$.

Thus $\angle EAF = \angle GAF$ and they face the equal arcs or chords.



So $EF = FG$.


A
F
D
B
G
C
α
α
α