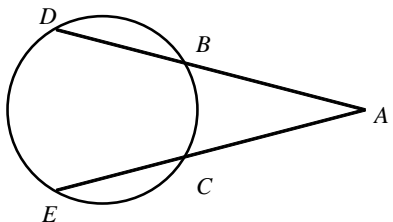
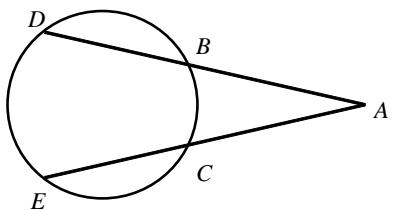


*G.G.51: Investigate, justify, and apply theorems about the arcs determined by the rays of angles formed by two lines intersecting a circle when the vertex is: inside the circle (two chords); on the circle (tangent and chord); outside the circle (two tangents, two secants, or tangent and secant)*

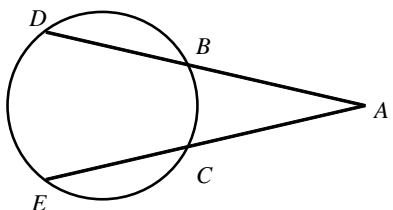
1. If  $m\widehat{DE} = 121$  and  $m\widehat{BC} = 83$ , find  $m\angle A$ .



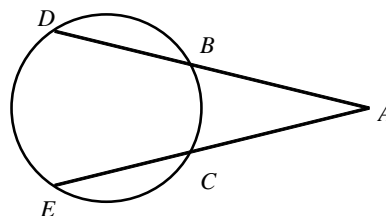
2. If  $m\widehat{DE} = 104$  and  $m\widehat{BC} = 60$ , find  $m\angle A$ .



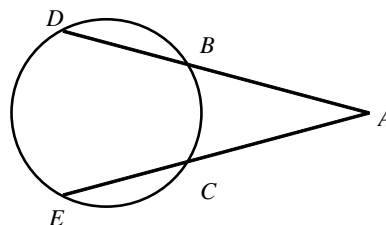
3. If  $m\widehat{DE} = 106$  and  $m\widehat{BC} = 64$ , find  $m\angle A$ .



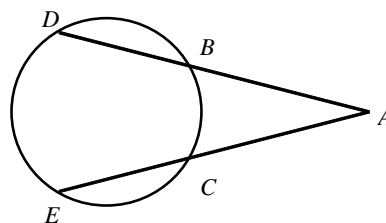
4. If  $m\widehat{DE} = 113$  and  $m\widehat{BC} = 67$ , find  $m\angle A$ .



5. If  $m\widehat{DE} = 125$  and  $m\widehat{BC} = 85$ , find  $m\angle A$ .



6. If  $m\widehat{DE} = 119$  and  $m\widehat{BC} = 71$ , find  $m\angle A$ .



7. Two secants from a point V outside a sphere intersect a great circle of a sphere, cutting off arcs of  $30^\circ$  and  $90^\circ$ . What angle do the secants make with each other at V?

## Geometry Practice: G.G.51 #2

[www.jmap.org](http://www.jmap.org)

[1] 19

[2] 22

[3] 21

[4] 23

[5] 20

[6] 24

[7] 30°