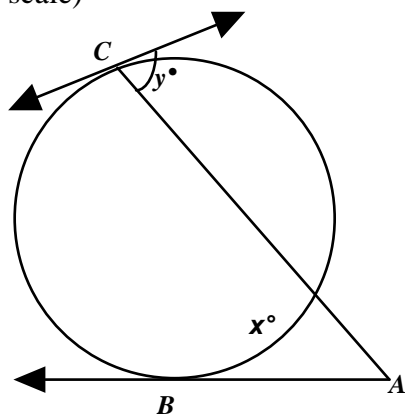


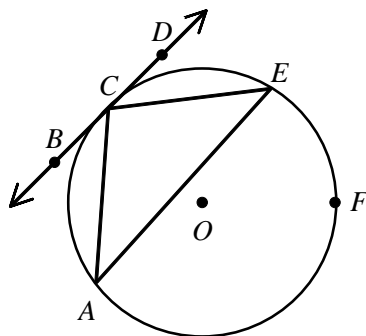
G.G.51: Investigate, justify, and apply theorems about the arcs determined by the rays of angles formed by two lines intersecting a circle when the vertex is: inside the circle (two chords); on the circle (tangent and chord); outside the circle (two tangents, two secants, or tangent and secant)

1. Find the measure of each variable if $m\angle A = 19$ and $m\widehat{BC} = 118$. (not drawn to scale)

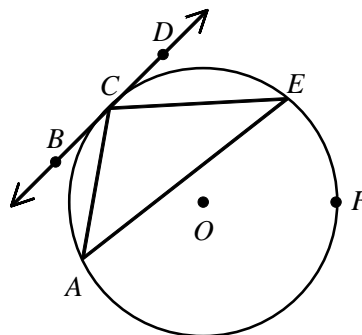


- [A] 80; 162 [B] 80; 81
[C] 99; 81 [D] 99; 162

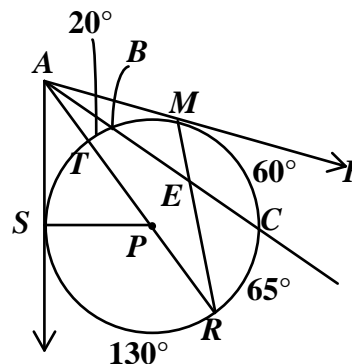
2. Given: \overleftrightarrow{BD} is tangent to $\odot O$ at C . The measure of $\widehat{EAC} = 284$ and $m\angle ACB = 41$. Find $m\widehat{AC}$.



3. Given: \overleftrightarrow{BD} is tangent to $\odot O$ at C . The measure of $\widehat{EFA} = 206$ and $m\angle ECD = 42$. Find $m\widehat{EC}$.



4. Given circle P with tangents \overleftrightarrow{AF} and \overleftrightarrow{AS} , which of the following has the greatest measure?



- [A] $m\angle CER$ [B] $m\angle SAR$
[C] $m\widehat{BM}$ [D] $m\angle FMR$ [E] $m\widehat{ST}$

Geometry Practice: G.G.51 #3

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[1] B

[2] 82

[3] 290

[4] D