$\qquad$

1. If $m \overparen{D E}=121$ and $m \overparen{B C}=83$, find $m \angle A$.

2. If $m \overparen{D E}=113$ and $m \overparen{B C}=67$, find $m \angle A$.

3. If $m \overparen{D E}=125$ and $m \overparen{B C}=85$, find $m \angle A$.

4. If $m \overparen{D E}=119$ and $m \overparen{B C}=71$, find $m \angle A$.

5. Two secants from a point $V$ outside a sphere intersect a great circle of a sphere, cutting off $\operatorname{arcs}$ of $30^{\circ}$ and $90^{\circ}$. What angle do the secants make with each other at $V$ ?
[1] 19
[2] 22
[3] 21
[4] 23
[5] 20
[6] 24
[7] $30^{\circ}$
