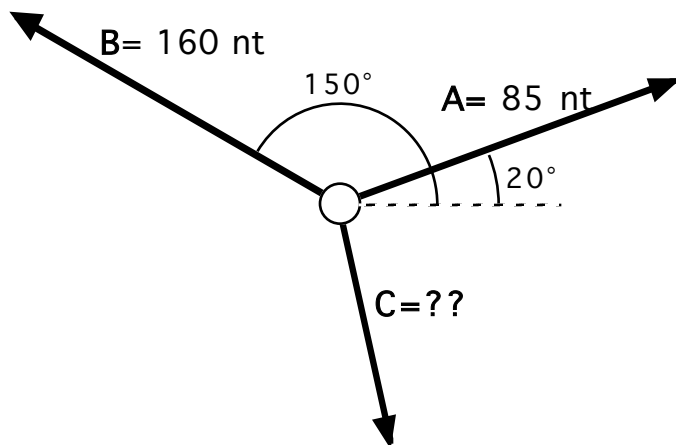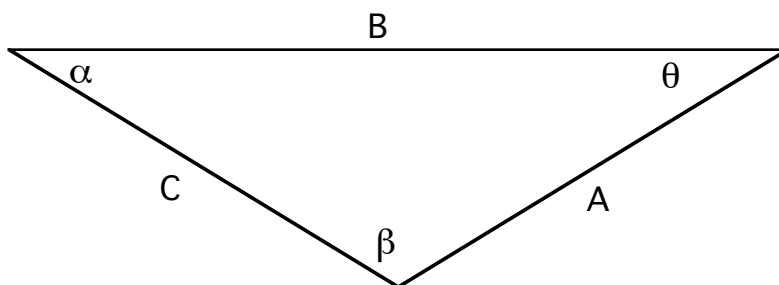ATTACHMENT1
Showing known forces **A** and **B** acting on a stationary ring. With unknown force **C** also acting, the ring is in equilibrium.

B= 160 nt

150°

A= 85 nt

20°

C=??

Below is shown a polygon with sides A, B and C, and angles α, β, and θ to illustrate the Law of Sines and Law of Cosines.

B

α

θ

C

A

β

Law of Sines: $\dfrac{A}{\sin \alpha} = \dfrac{B}{\sin \beta} = \dfrac{C}{\sin \theta}$

Law of Cosines: $A^2 = B^2 + C^2 - 2\,B\,C\,\cos \alpha$

(Gives any side in terms of the opposite angle and the other two sides.)