The problem in hand is to analyse the astrometry data of the given comet and to determine its trajectory. The distance of the comet as measured from the earth, b (measured in AU) and the angle between the comet and sun, C are given as shown in figure.

**Earth**

**C**

**a**

**Sun**

**B**

**b**

**A**

**c**

**Comet**

To find the trajectory, the distance between comet and sun, c and the angle between comet and earth, B are to be found.

The length ‘c’

c2 = a2 + b2 - 2ab*cos*(C)

The angle ‘B’

*cos*(B) =

**Earth**

**Sun**

**B**

**c**

**Comet**