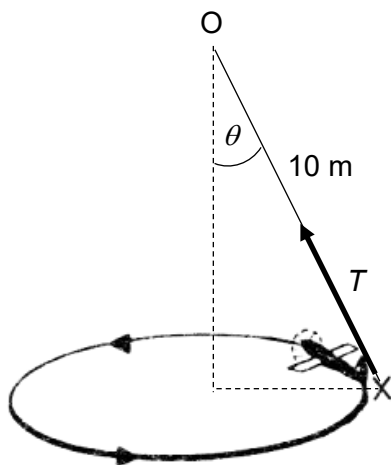


- 8 A model aeroplane X has a mass of 0.50 kg and has a control wire OX of length 10 m attached to it when it flies in a horizontal circle with its wing horizontal. The wire OX is at an angle of θ to the vertical and fixed to a point O as shown in the diagram below.



Aeroplane X takes 2.0 s to fly once round its circular path.

What is the tension T in the control wire?

- | | |
|---------------|----------------|
| A 25 N | B 49 N |
| C 99 N | D 200 N |