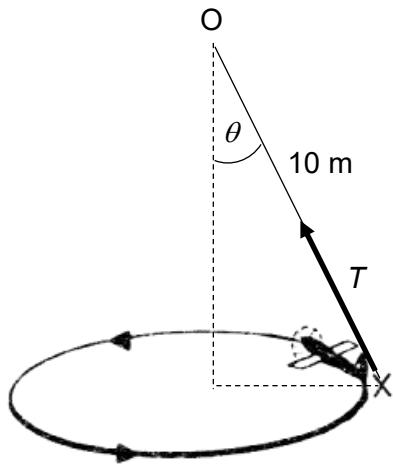


- 8** A model aeroplane X has a mass of 0.50 kg and has a control wire OX of length 10 m attached to it when it flies in a horizontal circle with its wing horizontal. The wire OX is at an angle of θ to the vertical and fixed to a point O as shown in the diagram below.



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