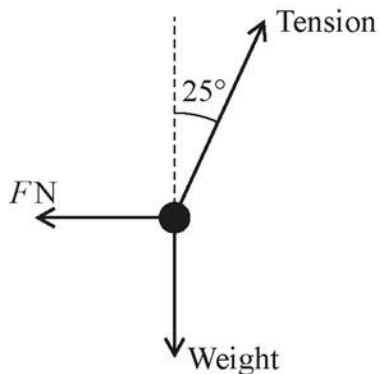


- 5 A sphere of mass 3 kg hangs on a string. A horizontal force of magnitude F N acts on the sphere so that it hangs in equilibrium with the string making an angle of 25° to the vertical. The force diagram for the sphere is shown below.



- (a) Sketch the triangle of forces for these forces. [2]
- (b) Hence or otherwise determine each of the following:
- the tension in the string
 - the value of F .
- [3]