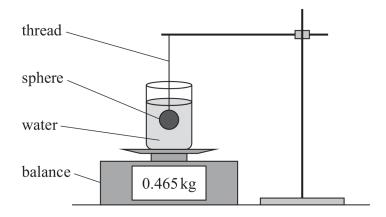
19 A student used the apparatus shown to investigate the forces acting on a uniform, solid sphere placed in water.



(a) Draw a free-body force diagram for the sphere when it is suspended in water as shown.

(3)

(b) As the sphere was lowered into the water, the reading on the balance increased from 315 g to 465 g as shown.

