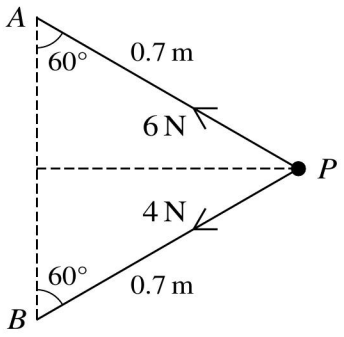

The ends of two light inextensible strings of length 0.7 m are attached to a particle P. The other ends of the strings are attached to two fixed points A and B which lie in the same vertical line with A above B. The particle P moves in a horizontal circle which has its centre at the mid-point of AB. Both strings are inclined at 60° to the vertical. The tension in the string attached to A is 6 N and the tension in the string attached to B is 4 N (see diagram).

(i) Find the mass of P. [2]

(ii) Calculate the speed of P. [3]