2 A ball is thrown from a point P, which is at ground level, as illustrated in Fig. 2.1.

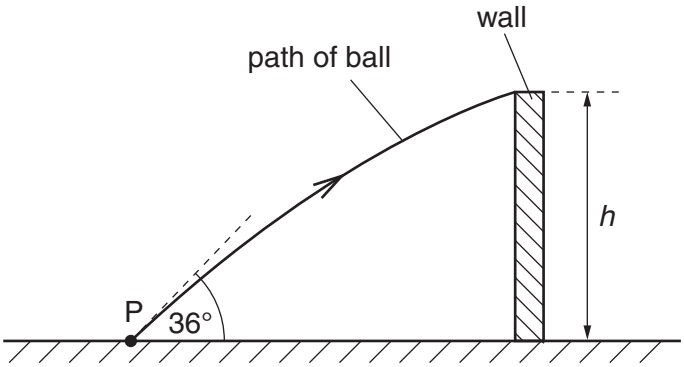

Fig. 2.1

The initial velocity of the ball is 12.4 m s^{-1} at an angle of 36° to the horizontal.
The ball just passes over a wall of height *h*. The ball reaches the wall 0.17 s after it has been thrown.

(a) Assuming air resistance to be negligible, calculate

(i) the horizontal distance of point P from the wall,

distance = ... m [2]

(ii) the height h of the wall.

h = ...m [3]

(b) A second ball is thrown from point P with the same velocity as the ball in **(a)**. this ball, air resistance is not negligible.
This ball hits the wall and rebounds.

On Fig. 2.1, sketch the path of this ball between point P and the point where it first hits the ground. [2]