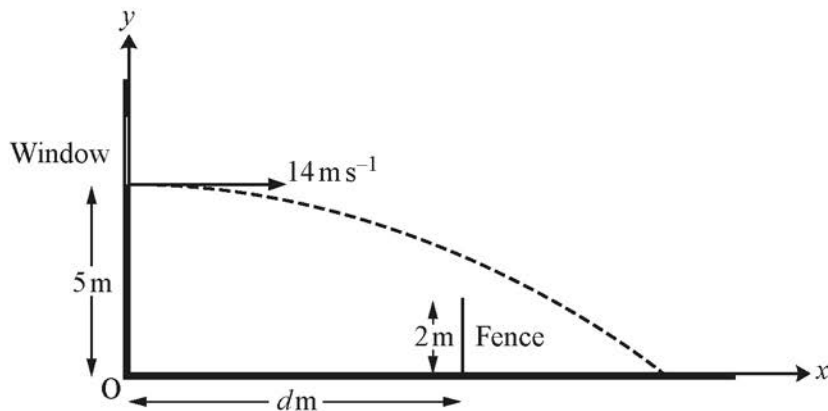**9** A pebble is thrown horizontally at $14\,\mathrm{m\,s^{-1}}$ from a window which is $5\,\mathrm{m}$ above horizontal ground. The pebble goes over a fence $2\,\mathrm{m}$ high $d\,\mathrm{m}$ away from the window as shown in Fig. 9. The origin is on the ground directly below the window with the x-axis horizontal in the direction in which the pebble is thrown and the y-axis vertically upwards.

Fig. 9

(i) Find the time the pebble takes to reach the ground. [3]

(ii) Find the cartesian equation of the trajectory of the pebble. [4]

(iii) Find the range of possible values for d. [3]