A small ball is projected with speed $25\,\mathrm{m\,s^{-1}}$ at an angle of 30° above the horizontal from a point O on horizontal ground. At time t s after projection the horizontal and vertically upwards displacements of the ball from O are x m and y m respectively.

(i) Express x and y in terms of t and hence find the equation of the trajectory of the ball. [4]

(ii) Find x for the position of the ball when its path makes an angle of 15° below the horizontal. [4]