

Further Mathematics: **9231 Mathematics - Further November 2025 Question Paper** 34

- 2

- (a)** Use the equation of the trajectory given in the list of formulae (MF 19) to show that

$$y = 2x - \frac{25x^2}{u^2}.$$

[1]

- (b)** In the subsequent motion, P passes through the point with coordinates $(8,12)$. The particle then hits a fixed vertical barrier 7 m high that is at a horizontal distance of D m from the point of projection.

Find the set of possible values of D .

[5]