10 A student investigates how the time taken for a ball to roll down a slope changes with the distance from the bottom of the slope.

This is the student's method.

- place a ball on the slope 10 cm from the bottom of the slope
- release the ball and start a stopwatch
- stop the stopwatch when the ball arrives at the bottom of the slope
- record the time taken for the ball to roll down the slope
- repeat for different distances from the bottom of the slope

(a) Complete the table by placing a tick (✓) to show which variables are the independent, dependent and control variables in this investigation.

(4)

	Independent	**Dependent**	**Control**
Surface of slope			
Angle of slope			
Distance travelled			
Time taken			

(b) The table shows the student's results.

Distance travelled in cm	**Time taken in s**
10	0.41
20	0.58
30	0.71
40	0.82
50	0.91

(i) Plot the student's data on the grid.

(1)

(ii) Draw a best fit curve.

(1)