Examiner only

(iii) Calculate a value for the gradient of the graph and include appropriate units. [3]

.....

.....

.....

.....

.....

(d) The period, T, of one oscillation is given by the equation:

$$T^2 = \left(\frac{4\pi^2}{g} \right) l$$

where g is the acceleration due to gravity.

(i) By using your answer to part *(c)*(iii) and comparing the above equation with that of a straight line ($y = mx + c$), calculate a value for g. [3]

.....

.....

.....

.....

.....

(ii) The accepted value for acceleration due to gravity, $g = 9{\cdot}81\ \text{ms}^{-2}$ and your answer can be considered accurate if it is within 5% of this value. Comment on your answer. [2]

.....

.....

.....

.....

16