Question Number	Answer		Mark
3(a)	• Measure **two** of sides AB, BC or AC • Calculate θ using: $\theta = \sin^{-1}$ (BC / AB) **Or** $\theta = \cos^{-1}$ (AC / AB) **Or** $\theta = \tan^{-1}$ (BC / AC)	(1) (1)	**2**
3(b)	• Measure the distance to the floor in two places using the metre rule **Or** place a spirit level along the bracket **Or** place a set square between the wall and the bracket **Or** place a protractor along the wall at the hinge **Or** correct description of applying Pythagoras theorem to the 3 measured lengths	(1)	**1**
3(c)	• Original/repeat measurements are not recorded • Inconsistent significant figures for F • x only recorded to nearest cm	(1) (1) (1)	**3**
3(d)(i)	• Intercept value between 0.7 and 0.9 N • Use of y-axis intercept $= \frac{W}{2sin\theta}$ • W value between 0.9 and 1.2 N Example Calculation $0.8\text{ N} = \frac{W}{2sin42^\circ}$ $W = 1.1$ N	(1) (1) (1)	**3**
3(d)(ii)	• Percentage difference = 1.7% • Percentage difference is small, so method is accurate [MP2 dependent on MP1] Example Calculation Percentage difference $= \frac{(9.81 - 9.64)}{9.81} \times 100\%$ Percentage difference = 1.7 %	(1) (1)	**2**
	Total for question 3		**11**