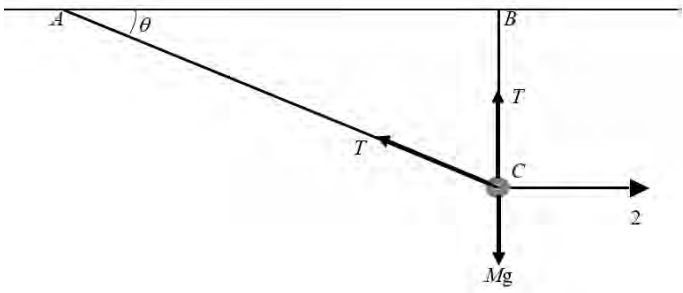


| QUESTION NUMBER | SCHEME | MARKS |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 1 |  | |
| (a) | Horiz: $2 = T \cos \theta$ | M1 A1 |
| | $T = 2.5$ | A1 |
| | | (3) |
| (b) | Vert: $T + T \sin \theta = Mg$ | M1 A1 |
| | $M = 0.41$ or 0.408 | A1 |
| | | (3) |
| | | (6) |
| | | |
| | Notes for question 1 | |
| | N.B. If they have different tensions, they can score all the marks in (a) but nothing in (b). If they have $2 = T \cos(\frac{4}{3})$ or similar and never recover, allow M1A0. | |
| (a) M1 A1 A1 | Horizontal equilibrium. Correct no. of terms, dimensionally correct, condone sin/cos confusion. Correct unsimplified equation. Correct answer. (ignore units) | |
| (b) M1 A1 A1 | Vertical equilibrium. Correct no. of terms, dimensionally correct, condone sin/cos confusion and missing g , to give an equation which must include M . Correct unsimplified equation Correct answer. (ignore units) | |