DATE

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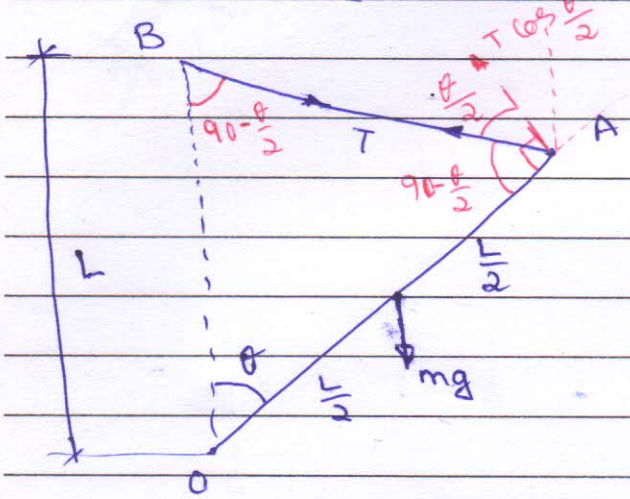
$T = ?$

$L =$

$\theta = 0 \le \theta \le 90^\circ$



$M_O = 0 \Rightarrow mg \times \frac{L}{2} \sin\theta = T \cos\frac{\theta}{2} \times L$

$mg \sin\theta = 2T \cos(\theta/2)$

$T = \frac{mg \sin\theta}{2\cos(\theta/2)}$

when $\theta = 0$ $T = 0$

$\theta = 15^\circ$ $= 0.13\,mg$

$\theta = 30^\circ$ $= 0.26\,mg$

$\theta = 45^\circ$ $= 0.38\,mg$

$\theta = 60^\circ$ $= 0.5\,mg$

$\theta = 75^\circ$ $= 0.61\,mg$

$\theta = 90^\circ$ $= 0.71\,mg$

at $\theta = 40^\circ$ $T = 0.34\,mg$

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