

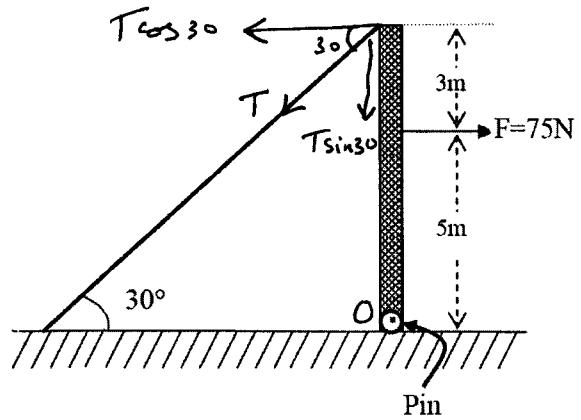
Phys101 – Quiz # 9 (Ch.12) – Sec # 39

Name:

Key

ID #

A uniform 50-kg beam is held in a vertical position by a pin at its lower end and a cable at its upper end. A horizontal force  $F = 75 \text{ N}$  acts as shown in the figure. What is the tension in the cable?



$$\vec{\tau}_{net, O} = 0$$

$$T \cos 30 (8) - 75(5) = 0$$

$$T = \frac{75(5)}{\cos 30 (8)} = \boxed{54.1 \text{ N}}$$