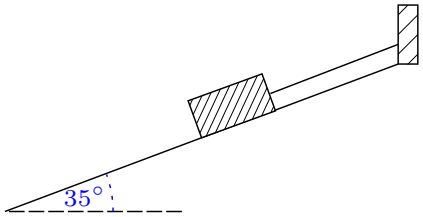
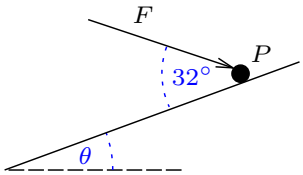
Basic Slope Problems

i. **A weight of 6kg is at rest on a smooth slope of 35°. The weight is held in place by a light string which is attached to a wall at the top of the slope. Find the tension in the string.**



ii. **A particle P of 300g is at rest on a smooth slope of $\theta°$ to the horizontal. The particle is held in place by a force F of $2N$, acting at $32°$ to the slope, as shown in the diagram. Find the value of θ.**



iii. **A brick B is held at rest on a smooth slope of $21°$ by a mass M of 2kg attacked to the brick by a light string running over a smooth pully, as shown in the diagram. Find the mass of the brick B.**