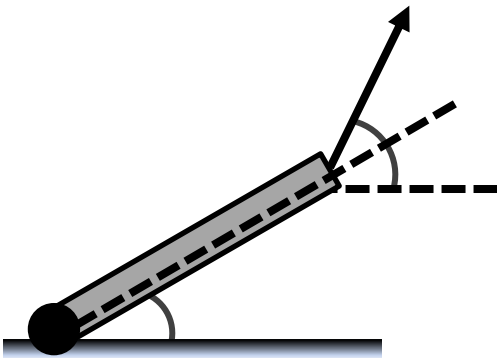


EXAMPLE: INCLINED BEAM AGAINST THE FLOOR

EXAMPLE: A 100 kg, 4 m-long beam is held at equilibrium by a hinge on the floor and a force you apply on its edge, as shown. The beam is held at 30° above the horizontal, and your force is directed 50° above the horizontal. Calculate the:

- (a) Magnitude of the force you apply on the beam;
- (b) Magnitude and direction of the Net Force the hinge applies on the beam.



PRACTICE: INCLINED BEAM AGAINST THE FLOOR

PRACTICE: A 200 kg, 10 m-long beam is held at equilibrium by a hinge on the floor and a force you apply on it via a light rope connected to its edge, as shown. The beam is held at 53° above the horizontal, and your rope makes an angle of 30° with it. Calculate the angle that the Net Force of the hinge makes with the horizontal (use $+/-$ for above/below $+x$).

