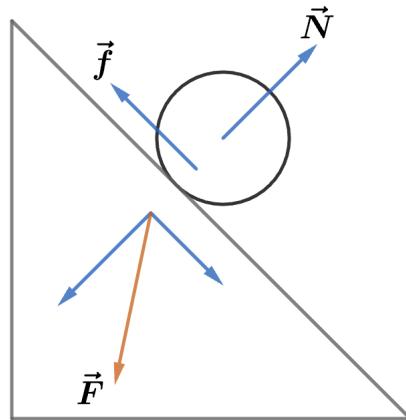


2014 F=ma Exam: Problem 2

Kevin S. Huang



Since the ball is rolling down the incline, there is a normal force N on the ball perpendicular to the incline and a friction force f on the ball up along the incline. By Newton's 3rd law, the ball exerts the same forces in the opposite directions on the plane. Thus, the total force \vec{F} that the ball exerts on the plane is

$$\vec{F} = -\vec{f} - \vec{N}$$

so the answer is E.