

3. • A boat with a horizontal tow rope pulls a water skier. She skis off to the side, so the rope makes an angle of 15.0° with the forward direction of motion. If the tension in the rope is 180 N, how much work does the rope do on the skier during a forward displacement of 300.0 m?
5. • You push your physics book 1.50 m along a horizontal tabletop with a horizontal push of 2.40 N while the opposing force of friction is 0.600 N. How much work does each of the following forces do on the book? (a) your 2.40 N push, (b) the friction force, (c) the normal force from the table, and (d) gravity? (e) What is the net work done on the book?
17. • A 0.145 kg baseball leaves a pitcher's hand at a speed of 32.0 m/s. If air drag is negligible, how much work has the pitcher done on the ball by throwing it?
22. • A 0.420 kg soccer ball is initially moving at 2.00 m/s. A soccer player kicks the ball, exerting a constant 40.0 N force in the same direction as the ball's motion. Over what distance must her foot be in contact with the ball to increase the ball's speed to 6.00 m/s?