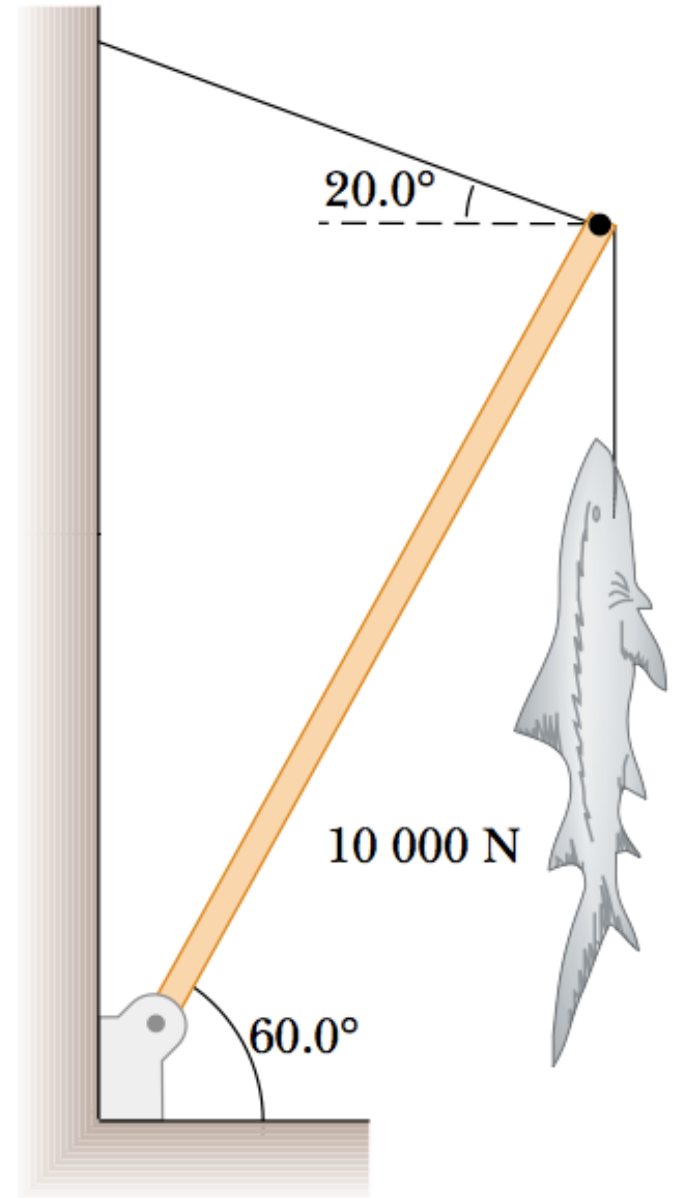Seat work:

A 10000-N shark is supported by a cable attached to a 4.00-m rod that can pivot at the base. Calculate the tension in the tie-rope between the rod and the wall if it is holding the system in the position shown. Find the horizontal and vertical forces exerted on the base of the rod. (Neglect the weight of the rod.)

Answers:
$F_T = 5.08 \times 10^3$ N
$F_H = 4.77 \times 10^3$ N
$F_V = 8.26 \times 10^3$ N

20.0°

10 000 N

60.0°

A stepladder of negligible weight is constructed as shown. A painter of mass 70.0 kg stands on the ladder 3.00m from the bottom. Assuming the floor is frictionless, find (a) the tension in the horizontal bar connecting the two halves of the ladder, (b) the normal forces at A and B, and (c) the components of the reaction force at the single hinge C that the left half of the ladder exerts on the right half. (Suggestion: Treat the ladder as a single object, but also each half of the ladder separately.)

Answers:
(a) F_T = 133 N
(b) F_{NA} = 429 N, F_{NB} = 257 N
(c) F_{LCX} = 133 N, F_{LCY} = 257 N

Homework (on one whole sheet):
Giancoli (3rd ed.) — 9-7, 9-10, 9-11, 9-12, 9-72