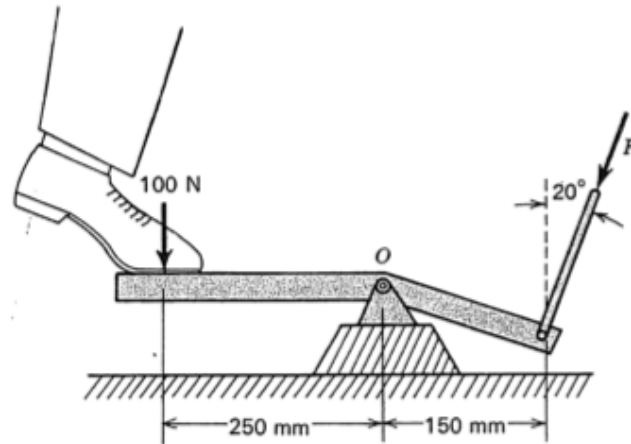Name: _____ Roll no. _____

AS 2010: Basic strength of materials. Quiz 1
slot, 2017

1. A 100 N force is needed to operate the foot pedal shown. Determine

   (a) the force in the connecting link, F and

   (b) the force exerted by the lever on the bearing at O.

   Neglect the weight of the lever. **50% weightage for correct and useful free body diagrams.**

2. The figure shows a light step ladder resting on a horizontal floor. Estimate the force in link AB when a man of weight 800 N stands on top of the ladder, i.e., at C. Assume reasonable support conditions at D and E and clearly state your assumption in words. **50% weightage for correct and useful free body diagrams.**