

**Chapter 3, Problem 1**

Two plates are fastened by a bolt and nut as shown in Figure P3.1. Calculate

- (a) The normal stress in the bolt shank.
- (b) The average shear stress in the head of the bolt.
- (c) The shear stress in the threads.
- (d) The bearing stress between the head of the bolt and the plate.

Assumption: The nut is tightened to produce a tensile load in the shank of the bolt of 10 kips.

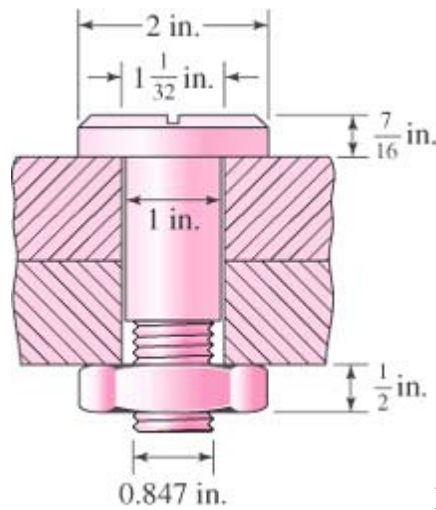


Figure P3.1

**Chapter 3, Problem 3**

The landing gear of an aircraft is depicted in Figure P3.3. What are the required pin diameters at A and B.

Given: Maximum usable stress of 28 ksi in shear.

Assumption: Pins act in double shear.

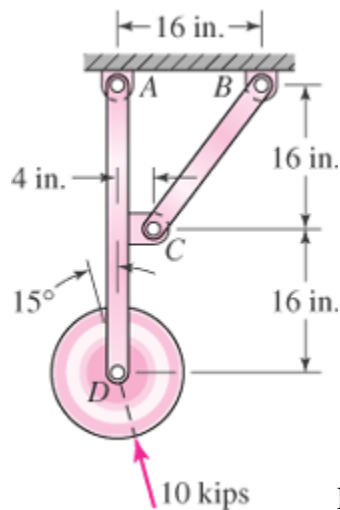


Figure P3.3