1. The member \( ABC \) is supported by a hinge at \( C \) and a cable \( BD \), as shown, where the ultimate load for the cable is 4 kips. Determine (a) the allowable magnitude of the load \( P \) if the desired factor of safety for the cable is 3.5, (b) the reaction force \( C \) at \( C \).

2. Define (a) normal stress, (b) shearing stress.

3. In the guides to learning mechanics, you are advised to learn the basics from two teachers. Who are they?

\[ + \sum M_C = 0: \quad 3P \sin 40^\circ + 6P \cos 40^\circ - 3F_{BD} \cos 30^\circ - 2F_{BD} \sin 30^\circ = 0 \]

\[ 3.5 = \frac{4000}{F_{BD}} \quad F_{BD} = 1142.857 \text{ lb} \quad P = 630.2407 \text{ lb} \]

\[ P = 630 \text{ lb} \quad C = -585i - 88.6j \text{ lb} \]