To do ...

• WA 7 due **Sun**

• Quiz 4 starts **Tues**

• HW 14 PL due **Tues**

• HW 15 ME due **Thurs**
Frames and machines

Frames and machines are two common types of structures that have at least one multi-force member (Recall that trusses have nothing but two-force members).

Frames are generally stationary and used to support various external loads.
Frames and machines are two common types of structures that have at least one multi-force member (Recall that trusses have nothing but two-force members).

Machines contain moving parts and are designed to alter the effect of forces.
Frames and machines

The members can be truss elements, beams, pulleys, cables, and other components. The general solution method is the same:
Draw the FBD of the members of the backhoe. The bucket and its contents have a weight $W$. 
Find the horizontal and vertical components of the pin reactions at C and the magnitude of reaction at B.
Find the force in the cable at the winch motor W and the horizontal and vertical components of pin reactions A, B, C, and D.