Announcements

- Quiz next week
- Have you been on Piazza lately?

- Upcoming deadlines:
  - Friday (9/21)
    - Writing Assignment
  - Tuesday (9/25)
    - PL HW
Objective

- Equivalent System
Example – 2D Equivalent System

Replace weights of the components of the truck with a single equivalent weight and specify its location measured from $A$. 

![Diagram of a truck with labeled weights and distances.](image-url)
Example – 2D Equivalent System

Replace the loading on the frame by a single resultant force. Specify where its line of action intersects a vertical line along member AB, measured from A.

\[ F_1 = 400 \text{ N} \]
\[ F_2 = 400 \text{ N} \]
\[ F_3 = 400 \text{ N} \]
\[ F_4 = 400 \text{ N} \]
Example – 3D Equivalent System

Find the equivalent resultant force and couple moment at point O as the two wrenches and the force acting on the pipe assembly below.