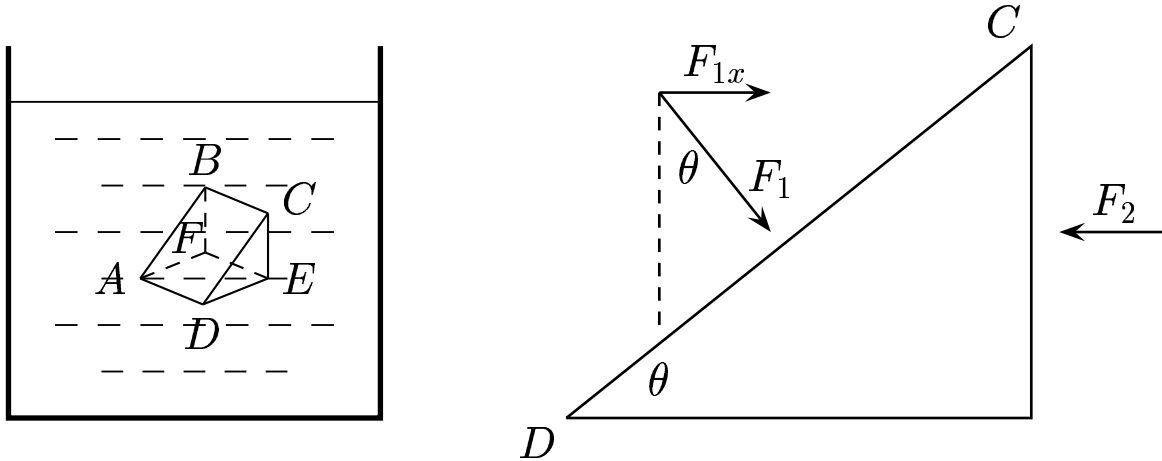


Consider a container filled with water. Imagine a small body of water in the shape of a rectangular prism. The inclined area $ABCD$ is A_1 . There is a normal force F_1 exerts on it. The vertical plane $BCEF$ has an area A_2 . There is a normal force that F_2 exerts on it.



Find the relationship between $P_1 = \frac{F_1}{A_1}$ and $P_2 = \frac{F_2}{A_2}$.

- A) $P_1 < P_2$.
- B) $P_1 = P_2$.
- C) $P_1 > P_2$.

Equilibrium implies $F_{1x} = F_2$.

Geometry: $\sin \theta = \frac{A_2}{A_1} = \frac{F_{1x}}{F_1}$.

$\frac{F_{1x}}{F_1} = \frac{F_2}{F_1}$. So $\frac{A_2}{A_1} = \frac{F_2}{F_1}$, or $P_1 = P_2$.

Answer **B**.