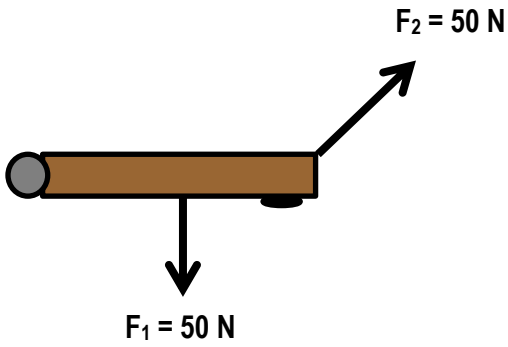
NET TORQUE AND THE SIGN OF TORQUE

● The SIGN of Torque depends on which direction the Force causes the object to spin → CW is ____; CCW is ____

- If multiple Torques are produced on an object, we can calculate the NET Torque → τ_{NET} = _____

- Torques are _____, so we use simple addition (not vector addition) to find Net Torque.

EXAMPLE: Two forces act on the same 3-m wide door, as shown. F_1 acts on the center of the door, and F_2 is directed 30° above the x-axis. Calculate the Net Torque produced on the door. Use signs (+/–) to indicate the direction of the Torques.



PRACTICE: NET TORQUE / FORCES ON A BAR

PRACTICE**:** A 2-m long bar is free to rotate about an axis located 0.7 m from one of its ends. Two forces act on the bar**,** $\mathbf{F_1}$ = 100 N and $\mathbf{F_2}$ = 200 N, and both make 30º with the bar. Find the Net Torque on the bar. Use **+/–** to indicate direction**.**