Name: _____ **Date:** _____
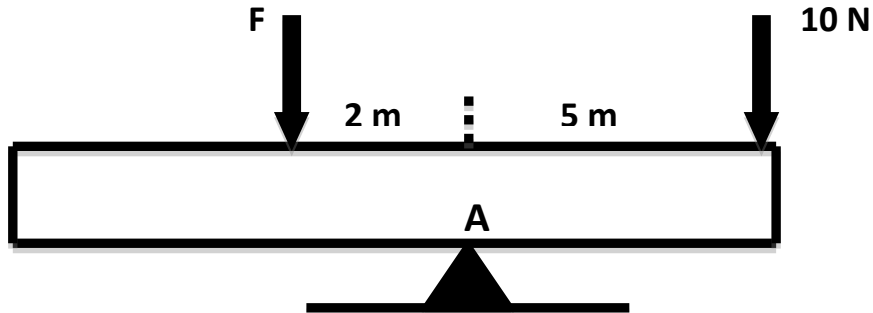
Static Problems Worksheet

Equilibrium Equations:		
$\Sigma F_x = 0$ **(1)**	$\Sigma F_y = 0$ **(2)**	$\Sigma M = 0$ **(3)**

1. Determine force F and the reaction force R_A that satisfy the equilibrium equations for the following beam:
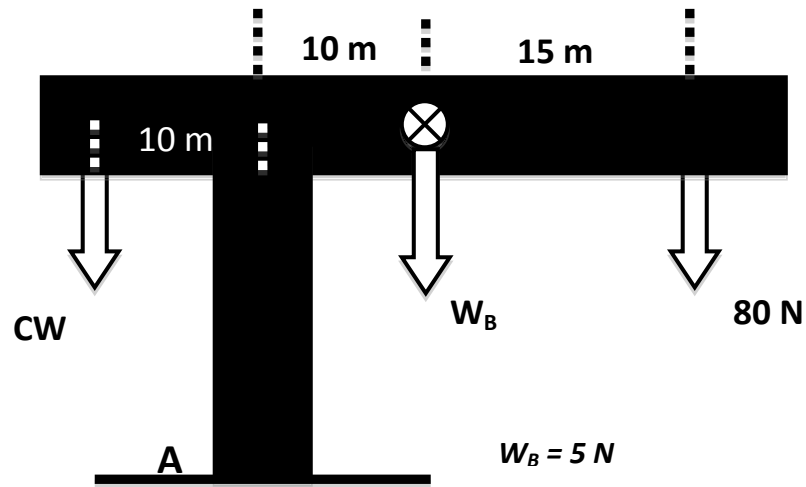

Step 1.   Draw a free-body diagram of the beam:

Step 2.   Using Equation (3), determine the force F:

Step 3.   Using Equation (2), determine the force R_A:

2. Given the diagram below, determine the load CW and R_A:

10 m   **15 m**

10 m

CW W_B **80 N**

A $W_B = 5\ N$

Step 1.   Draw a free-body diagram of the entire crane:

Step 2.   Using Equation (3), determine the force CW:

Step 3.   Using Equation (2), determine the force R_A: