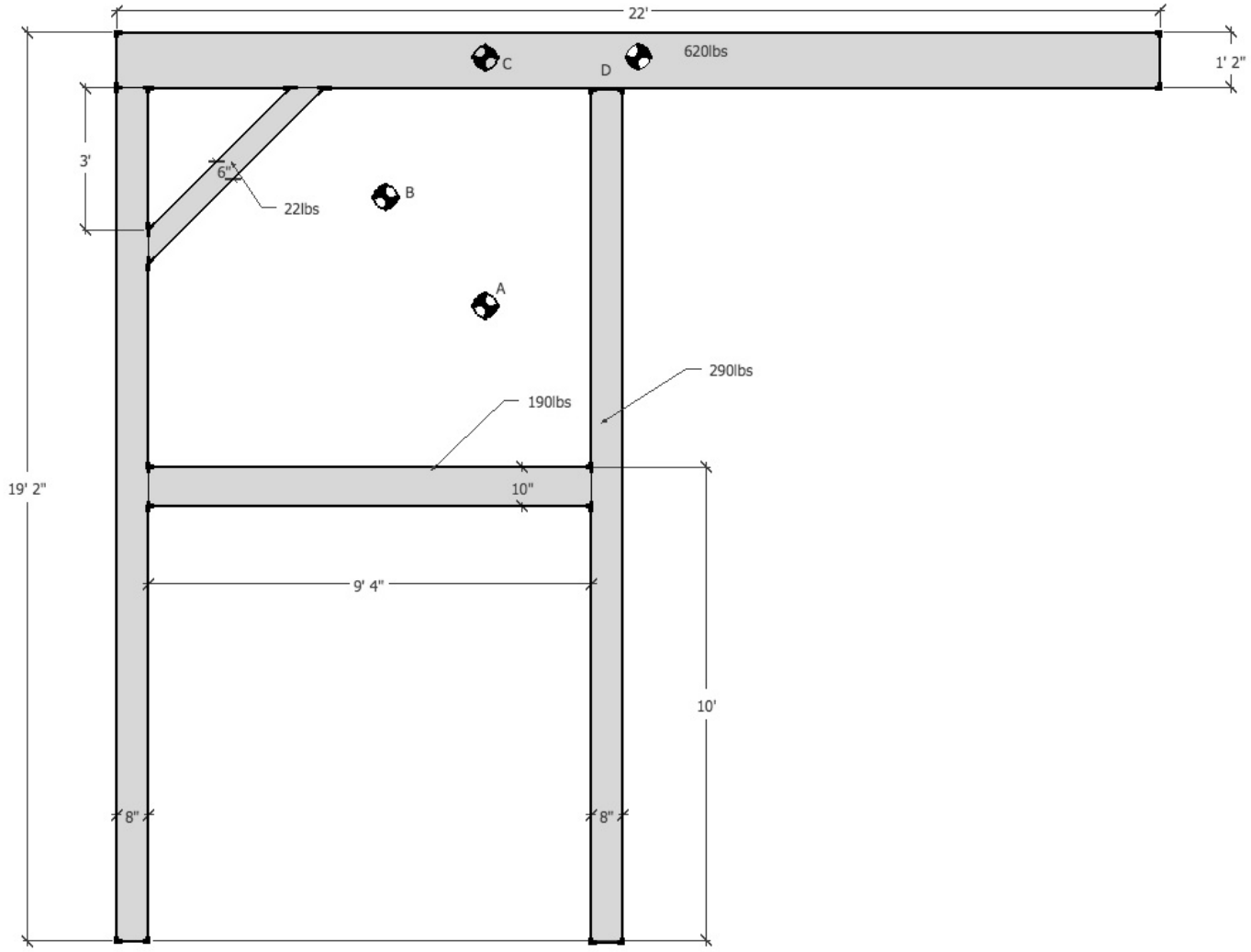
Center of Gravity Pretest

Answer the questions by circling the correct answer

Name: _____

Center of Gravity

1. The porch bent below is being added to an existing house.



Using the weights indicated for each timber, the center of gravity is located at (x,y) from the bottom left corner of the left post

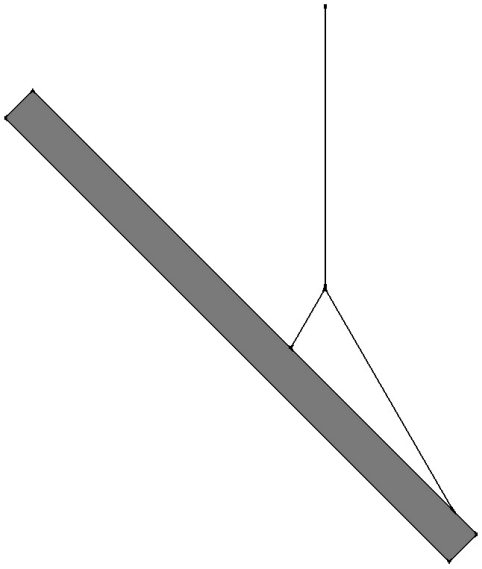
A. 7' 9 1/4", 13' 4 13/16" B. 5' 4" , 15' 6 1/4" C. 7' 9 1/4" , 18' 7" D. 11', 18' 7"

2. If the material were white oak instead of douglas fir, the center of gravity would be located at

   A. 7’ 9 1/4”, 13’ 4 13/16” B. 5’ 4” , 15’ 6 1/4” C. 7’ 9 1/4” , 18’ 7” D. 11’, 18’ 7”

3. Draw in the location with dimensions of two lifting points that would allow the top plate to hang level.

4. An object drawn below is hanging at rest from a crane with two slings. Draw a line along which the center of gravity must lie.



5. What must be true about the object in question #4
   A. It has a non uniform cross section B. It has a non uniform density C. It cannot be made of wood
   D. It is made of steel

6. The drawing below represents a cross section and side view of three steel objects. Indicate the location of the center of mass for each of the three objects.