

The Utmost Mechanical Advantage

Solution:

The correct answer is d.)

For A and B sections, it might be helpful to consider the extreme case that the lower pulley is excessively big. Recall that the magnitude of tension is everywhere the same along the string. And only the vertical components of tension along A and B contribute to counteracting the weight.

See the single pulley on the right? It will tell you why C does not have to be vertical.