

Working the Lift



History:

The manual lift in the Springfield home was originally used for luggage. Though the lift could have been powered by electricity, FDR decided against it for fear of house fires. After the president was diagnosed with polio and living in the Hyde Park home, the luggage lift became FDR's way of moving freely between floors. Since it was a manual lift, the president would pull himself up with all the upper body strength he had while he was sitting in his wheelchair.

Problem:

Assume the weight of the lift is 100lbs, the weight of the president was 182 lbs and the weight of his wheelchair was 33 lbs. How much work did the president use to pull himself up 25 feet from the first floor?

