Lever and Pulley Homework

Combining lever(s) and pulley(s) design two systems for a person who can apply a force of 50 pounds to be able to lift a weight of 500 pounds off the ground.

1. What is the minimum mechanical advantage required to be able to do this?

2. For the first attempt, design a “Rube Goldberg” device that is as complex as you can make it. Use levers, pulleys to change direction, pulleys to multiply forces, etc.

3. For the second attempt, design a system that is as efficient (i.e., minimum equipment – most cost-effective) as possible to achieve the goal.

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