

NAME _____

PHYSICS HOMEWORK QUIZ #11F

PERIOD _____

SIMPLE MACHINES

A simple machine consists of a pulley system consisting of six pulleys as shown to the right. An input force of $F = 220.0 \text{ N}$ is applied to the input and as a result of this input force the mass M is lifted a distance of 25.0 cm . This machine has a mechanical efficiency of 88.0% .

1. What is the **ideal mechanical advantage** of this system? [3 pts]
2. What is the **actual mechanical advantage** of this machine? [3 pts]
3. What is the **mass** of the load M ? [3 pts]
4. How much **work** was done on the mass M ? [3 pts]
5. Through what **distance** was the input force applied? [3 pts]

