Choose the correct answer for the following questions

Complete each sentence with the correct term from the Study Guide.

1. A combination of two or more simple machines is a(n) _____.

2. The ratio of the output force to the input force is the _____ of a machine.

What term indicates the number of times a machine multiplies the input force?

A) efficiency
B) power
C) mechanical advantage
D) resistance

Which factor increases as the efficiency of a machine increases?

A) work input
B) work output
C) friction
D) input force

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Which cannot be done by a machine?

A) increase force

B) increase work

C) change direction of a force

D) increase velocity

An input force of 80 N is used to lift an object weighing 240 N with a system of pulleys. What is the mechanical advantage of the pulley system?

A. 2

B. 3

C. 4

D. 5

It takes 600 J of work to lift a crate straight up but 1,200 J to push that crate up a ramp to the same height. What is the efficiency of the ramp?

A. 30 percent

B. 50 percent

C. 75 percent

D. 200 percent

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