Simple machines can do all of these things for us, *except* give us _____.

A) less work

B) more force

C) more speed

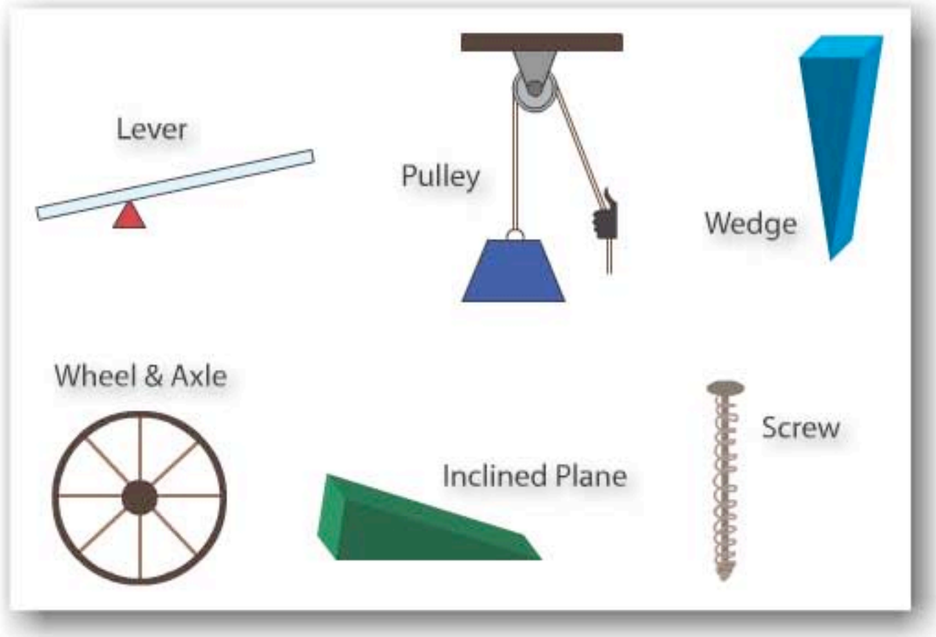
D) force in a different direction

Well Done!

Reset

Gains and Losses with Simple Machines

We have studied all six simple machines: lever, wheel & axle, pulley, inclined plane, wedge, and screw.



We saw that the wheel & axle works much like a lever. A wheel & axle is sort of a **spinning** lever. We also saw that inclined planes, wedges, and screws are a lot alike. A wedge is a double inclined plane that moves and forces things apart. A screw is a long inclined plane wrapped round and round.

Simple machines can do three things to the force we apply when doing work. They can change the direction of force, they can make the force greater, and they can make the force less. Machines can also change the direction

continue reading

Gains and Losses of a Lever

Remember, a **200-pound** (817-newton) rock creates a **200-pound** (817-newton) **Resistance Force.** If you give an **Effort Force** of **50 pounds** (204 newtons), you would have to push down **48 inches** (120 centimeters) on the lever. This is your **Effort Distance.** However, the lever would only raise the rock **12 inches** (30 centimeters). This is the **Resistance Distance.**

Resistance Distance: (Loss)

9 inches (22.5 cm)

Load

Effort Force (Gain)

200 pounds (817 newtons)

Effort Distance: (Loss)

36 inches (90 cm)

Fulcrum

Resistance Force (Gain)

Reset