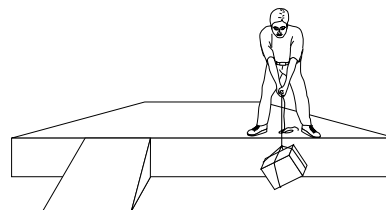


Work and Machines ▪ *Review and Reinforce*

How Machines Do Work

Understanding Main Ideas

In the diagram, the man can either pull the box upward onto the platform or pull the box up the ramp. Use the diagram to answer Questions 1 through 4.



If the statement is true, write true. If it is false, change the underlined word or words to make the statement true.

- _____ 1. The work of pulling the box will be easier if the man uses the ramp.
- _____ 2. The ramp makes work easier by reducing distance.
- _____ 3. To calculate the efficiency of the ramp, divide the output work by the input work and multiply the result by 100 percent.
- _____ 4. The ideal mechanical advantage of the ramp is its mechanical advantage with friction.

Building Vocabulary

From the list below, choose the term that best completes each sentence.

- | | |
|-----------------------------|----------------------------|
| machine | mechanical advantage |
| actual mechanical advantage | input force |
| efficiency | input work |
| output force | ideal mechanical advantage |
| output work | |

5. A machine's _____ is the number of times the machine multiplies the input force.
6. The force you exert on a machine is called the _____.
7. A(n) _____ is a device you can use to make work easier.
8. The _____ is the mechanical advantage of a machine without friction.
9. The _____ is the mechanical advantage that a machine provides in a real situation.
10. The _____ of a machine compares the output work to the input work and is expressed as a percent.
11. The force exerted by a machine is called the _____.