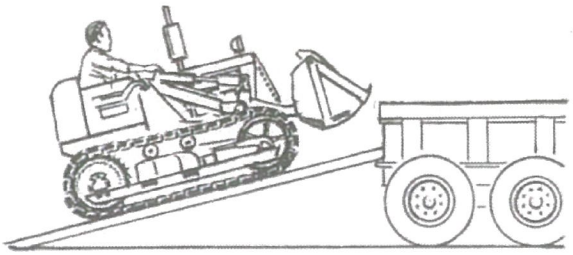
INCLINED PLANES

HOW DOES AN INCLINED PLANE CHANGE THE FORCE NEEDED TO LIFT AN OBJECT?



What do you think is the answer to the question?

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Work with a partner and complete the following activity.

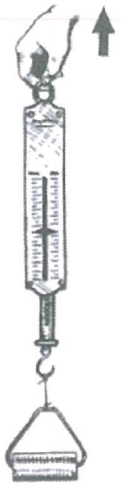
INSTRUCTIONS

1. Find the force needed to lift the roller upwards.

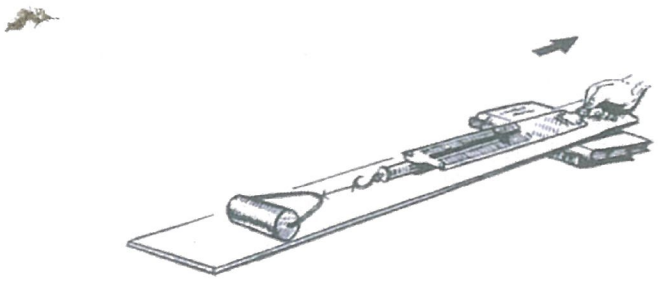
2. Adjust your inclined plane so that it is horizontal. Find the force needed to pull the roller horizontally at a slow, steady rate.

3. Raise the plane slightly. Measure the change in slope. Find the force required to pull the roller up the plane. Record this in the table provided.

4. Continue to increase the angle of the slope. Measure and record the force required to pull the roller up the plane for different slopes.



5. Draw a graph of your results. Ask your teacher for assistance if you need it.



RESULTS

SLOPE	FORCE

QUESTIONS

- How does an inclined plane change the force needed to raise the object to a higher level?

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- What happens to the force needed to move the object as the slope becomes steeper?

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- What was the force required when the angle of the slope was 45°? .....

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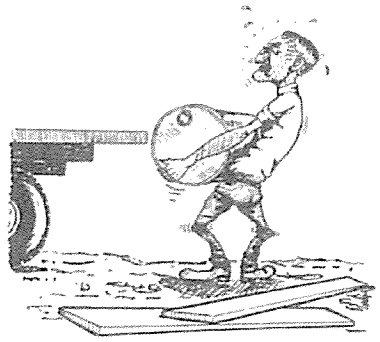

This workman is finding it difficult to lift the heavy drum onto his truck. Can you think of a way he could do the same work more easily?

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