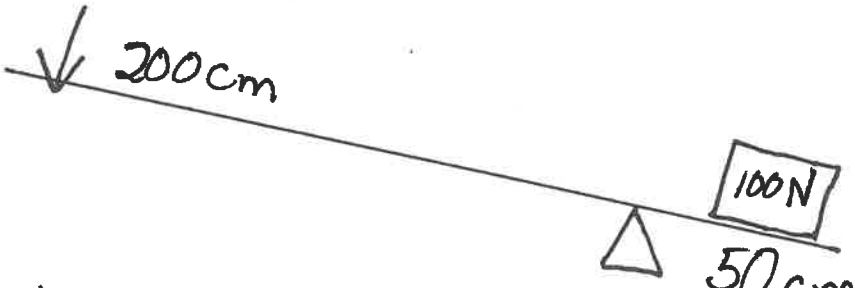
Questions:

1. What are the 6 types of simple machines?
2. What is mechanical advantage?
3. What are the three types of levers and how does each work?
4. How do you calculate the mechanical advantage of a lever?
5. How do you calculate the mechanical advantage of a wheel and axle?
6. What are two things that pulleys do?
7. How do you find the mechanical advantage of movable pulleys?
8. If the slope of an incline plane is 50ft and the height of the ramp is 5ft what is the mechanical advantage?
9. What are two differences between a wedge and an incline plane?
10. Give two examples of wedges that people use for everyday applications?
11. What is the pitch on a screw?
12. Calculate the pitch of a screw with 30 threads with each thread being 6mm apart.
13. What is the formula for work?
14. What are four ways that simple machines make work easier?
15. What happens when a force is applied to a wheel to make the axle spin if the distance and speed decreases?

Name _____ pd _____

1. Find the mechanical advantage of the lever below. After you find the MA, determine how much effort force you must apply to move the object up 10cm. How for must you push down?

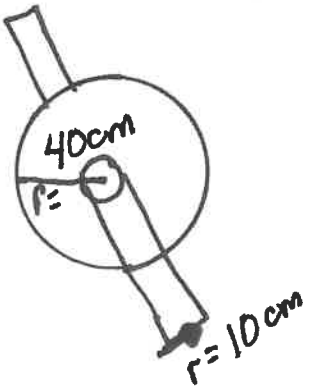


MA = _____

Effort Force needed = _____

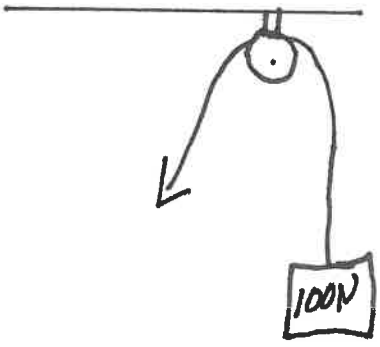
Distance needed to push ↓ to lift load 10cm = _____

2. Find the MA of the wheel and axle



MA = _____

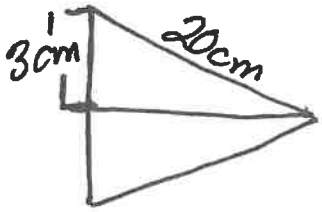
3. Find the MA of the pulley



MA = _____

How much effort force is needed to lift the load? = _____

4. Find the MA of the wedge

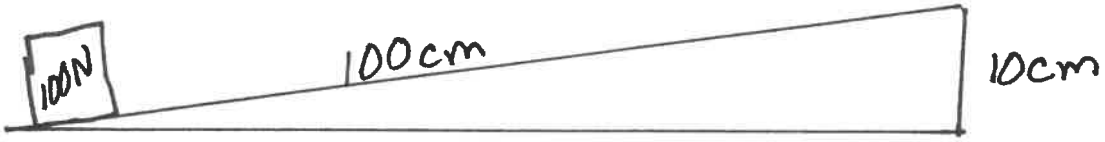


MA = _____

5. Find the MA of the screw

MA = _____

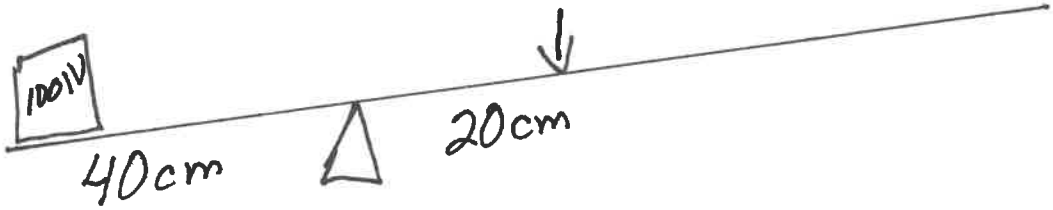
6. Find the MA of the inclined plane



MA = _____

How much force needed to move the load up the ramp = _____

7. Find the MA of the lever.

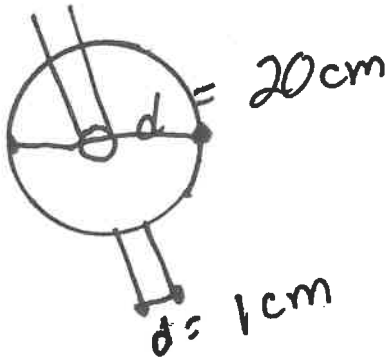


MA = _____

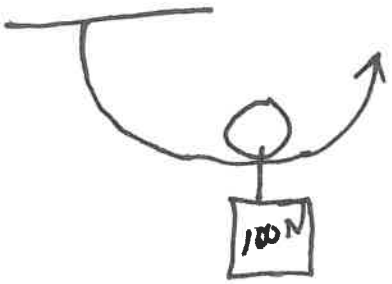
How much force is needed to lift the load 30 cm up?

How far do you need to push ↓ to lift it the 30cm = _____

8. Find the MA of the wheel and axle



9. Find the MA of the pulley.

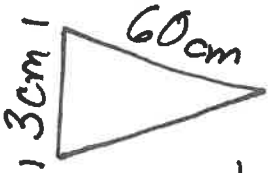


MA = _____

How much effort is required to lift the load? = _____

If you wanted to lift the box 20cm, how far must the effort move? = _____

10. Find the MA of the wedge.



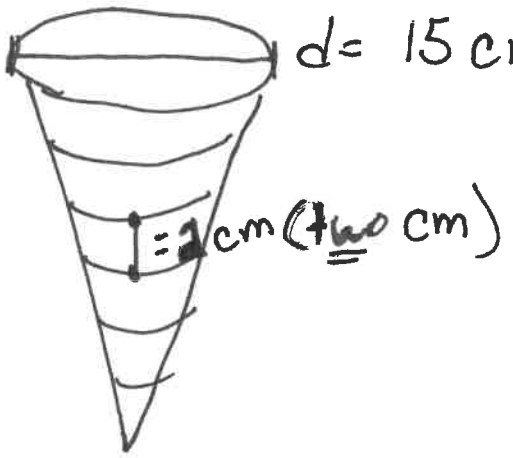
MA = _____

How can we make this wedge gain more MA?

1. _____

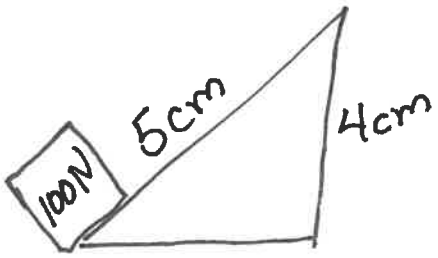
2 _____

11. Find the MA of the screw



MA: _____

12. Find the MA of the inclined plane



MA: _____

How much effort is needed to move the load? _____

How can we make this inclined plane have more MA?

_____