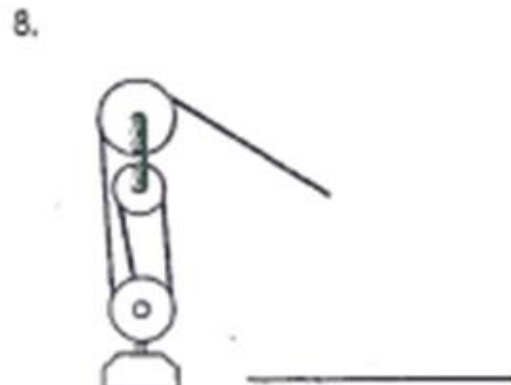
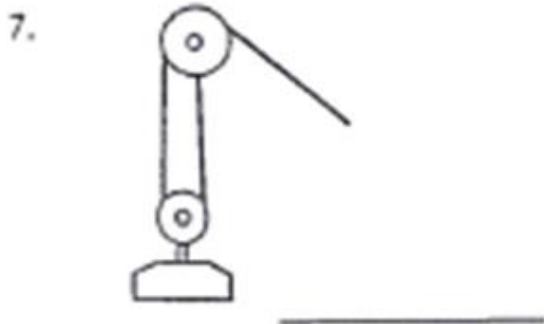
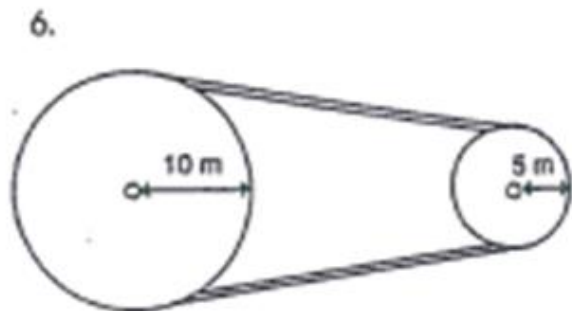
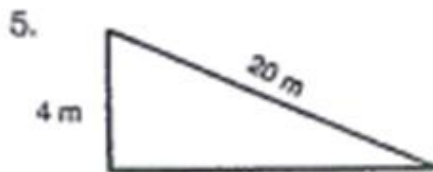
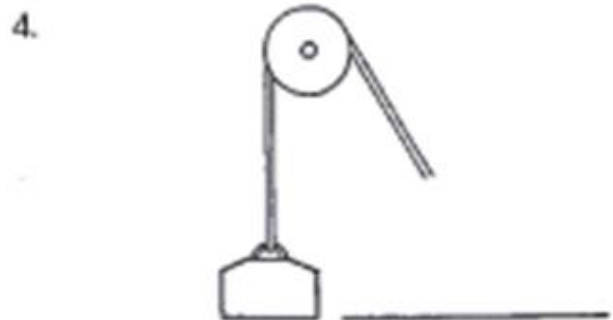
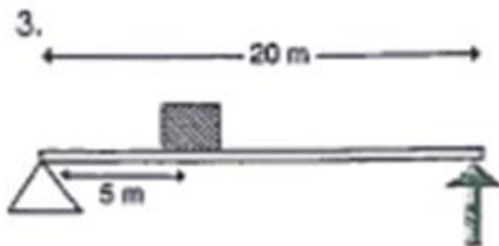
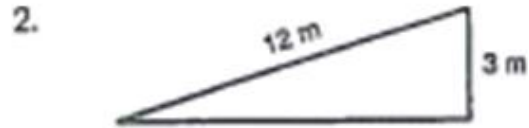
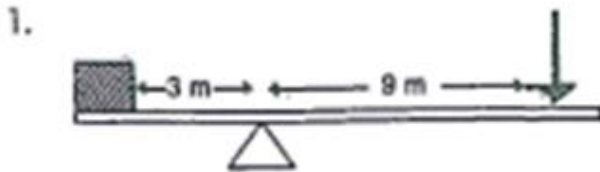


Calculating Mechanical Advantage

Name: _____ Class: _____

Using the formulas for Mechanical Advantage of Simple Machines (Check my blog if you did not complete it), calculate the mechanical advantage of each of the following simple machines.



9. A lever used to lift a heavy box has an effort arm of 4 meters. It's Resistance arm is .8 meters. What is the MA of the lever?

$$MA = \underline{\hspace{2cm}}$$

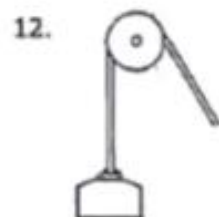
10. What is the mechanical advantage of a lever that has an effort arm of 3 meters and a resistance arm of 2 meters?

$$MA = \underline{\hspace{2cm}}$$

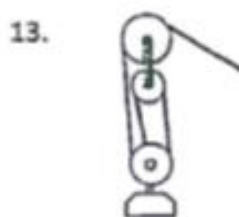
11. A lever with an effort arm of 2 meters has a mechanical advantage of 4. HOW LONG is the resistance arm?

$$MA = \underline{\hspace{2cm}}$$

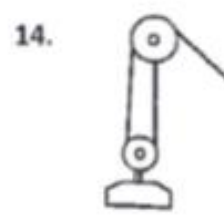
To find the MA of a pulley system – count the number of supporting ropes.



$$MA = \underline{\hspace{2cm}}$$



$$MA = \underline{\hspace{2cm}}$$



$$MA = \underline{\hspace{2cm}}$$

To find the MA of a wheel and Axle – use the formula $MA = \frac{\text{radius of large wheel}}{\text{Radius of small wheel}}$



$$MA = \underline{\hspace{2cm}}$$

To find the MA of an inclined plane – $MA = \frac{\text{length of inclined plane}}{\text{Height of inclined plane}}$



$$MA = \underline{\hspace{2cm}}$$

17. A 5 meter ramp lifts objects to a height of .75 meters. What is the MA of the ramp?

$$MA = \underline{\hspace{2cm}}$$

18. Challenge!!! A mover uses a ramp to pull a 1000-Newton cart up to the floor of his truck (.8meters high). If it takes a force of 200 Newtons to pull the cart, what is the length of the ramp?