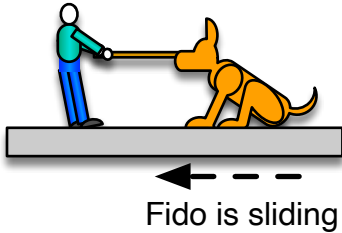


## Cycle 3: Coefficient of Friction and Adjusting Normal Force

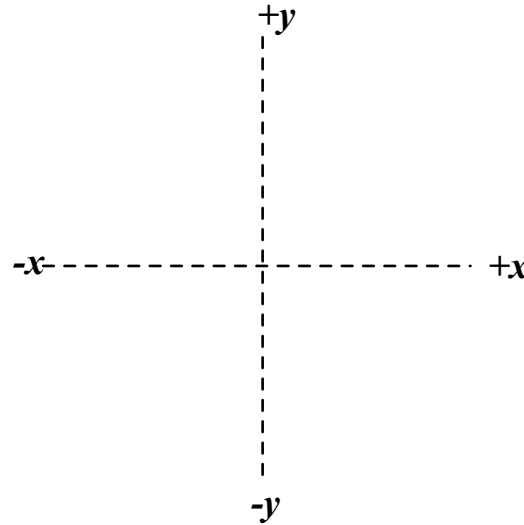
## Review

Fido doesn't want to go for a walk! There is 60 N of tension in the leash. Fido weighs 500 N. The coefficient of friction between Fido's paws and the ground is 0.1.



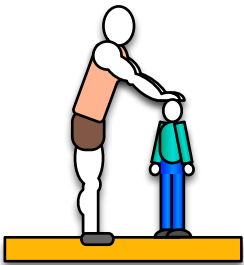
x:  $F_{net}$

y:  $F_{net}$



- ☐ Fido is slowing down.
- ☐ Fido is speeding up.
- ☐ Fido's speed is constant.

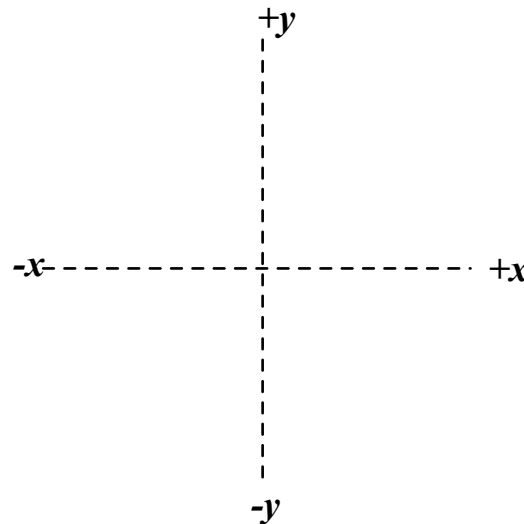
- ☐ Fido is slowing down.
- ☐ Fido is speeding up.
- ☐ Fido's speed is constant.



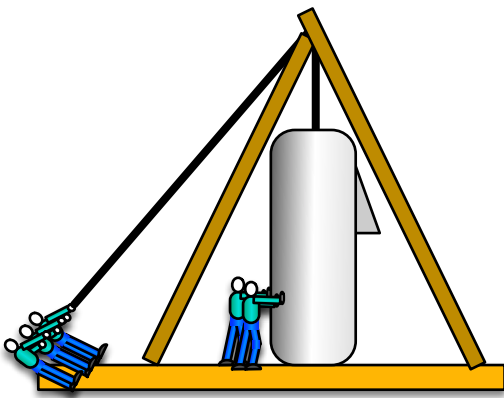
The small person weighs 500 N.  
The large person pushes downward with a force of 100 N.  
The small person is at rest and staying at rest.

Fill in the force diagram and determine the Normal Force on the small person.

y:  $F_{net}$



- ☐ The small person is slowing down.
- ☐ The small person is speeding up.
- ☐ The small person's speed is constant.



statue is sliding

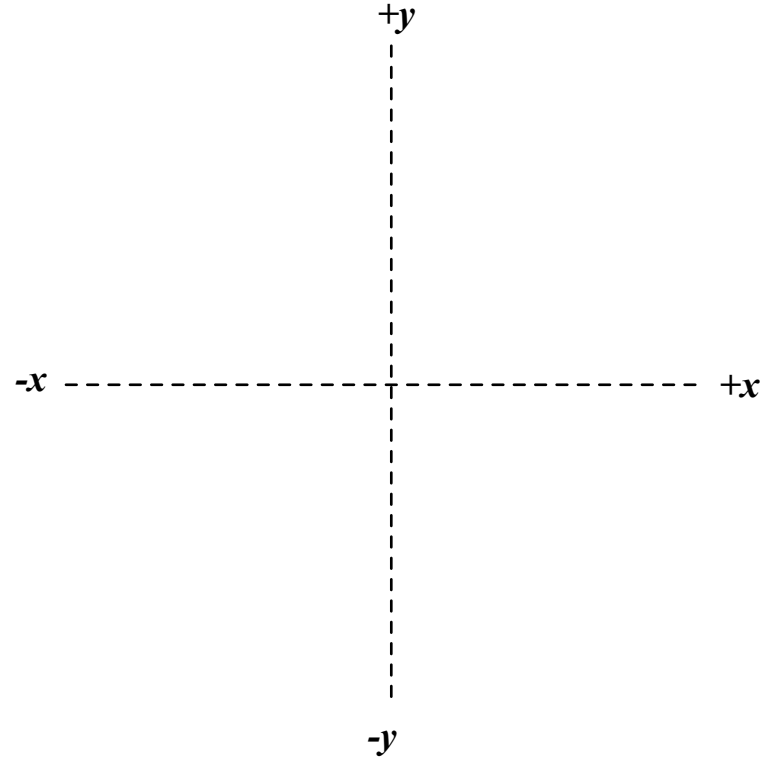
The statue weighs 30,000 N.  
 The people put 6,000 N of tension in the rope.  
 The other people push the statue to the right with a force of 1,000 N. The coefficient of friction for the statue and ground is 0.5.

Put arrows & labels for all forces on the diagram.

Determine the Normal Force.

Determine Friction.

Determine the Net Forces and the motion in each direction.



x: $F_{net}$

y: $F_{net}$

- ☐ The statue is slowing down.
- ☐ The statue is speeding up.
- ☐ The statue's speed is constant.

- ☐ The statue is slowing down.
- ☐ The statue is speeding up.
- ☐ The statue's speed is constant.