

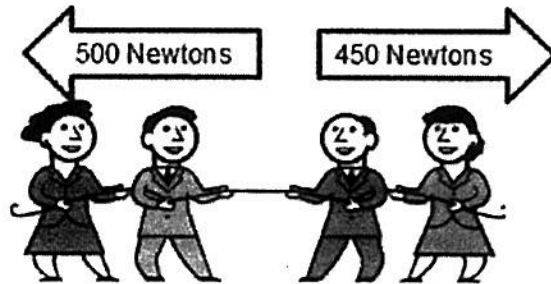
Name: _____

Date: 10/25/18
Forces and Motion (NOTES)

Science 7

Aim: I can describe factors that affect friction and gravity.

Do Now: Answer the following questions based on the diagram.



A. Are the forces balanced or unbalanced? unbalanced

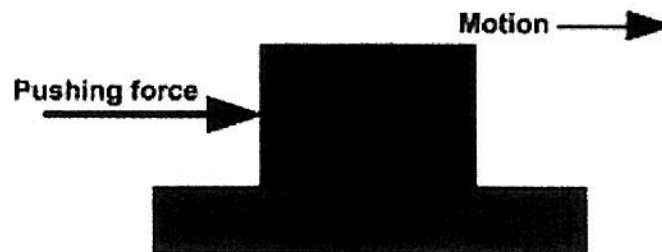
B. In which direction will the rope move? to the left

C. Calculate the Net Force. $500\text{ N} - 450\text{ N} = 50\text{ N} \leftarrow$

Notes:

Friction:

- Force that opposes motion between two surfaces that are touching each other.
- Factors that affect the force of friction are the types of surfaces involved and how hard the surfaces are pushed together.
- Always works in the opposite way of motion.
- Produces heat



Types of Friction:

1. **Sliding Friction:** Friction applied when two solid surfaces slide over each other. It is what makes moving objects slow down.

Examples: skiing, penguin sliding on ice,
baseball player sliding into a base

2. Rolling Friction: Friction applied when an object rolls across a surface.

Examples: Bowling ball rolling down an alley

3. Fluid Friction: Friction applied when a solid object moves through a fluid. It's also known as "drag", or "air resistance".

Fluids: Anything that flows (Air, Water)

Examples: Kite flying through air, fish swimming, bird flying

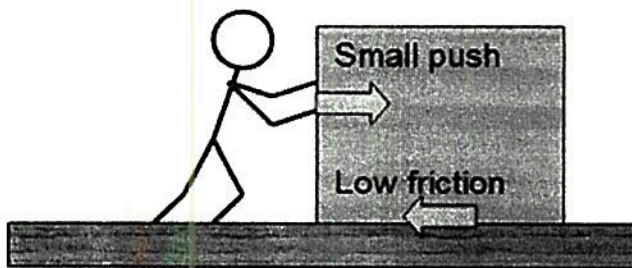
4. Static Friction: Friction between objects that aren't moving. Force that keeps you from moving.

Examples: furniture on the floor,

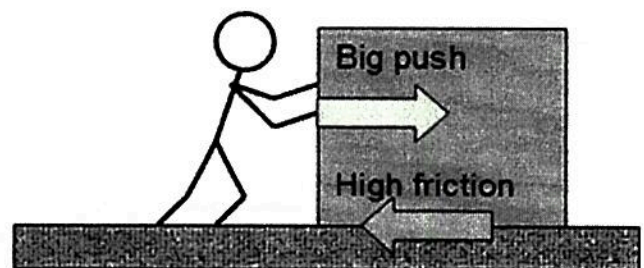
Benefits of Friction

Examples:

- Cleats on Soccer Shoes
- Gymnasts put chalk on their hands
- Sand thrown on sidewalks during snow storms
- Stopping a car using the brakes



Smooth surface



Rough surface