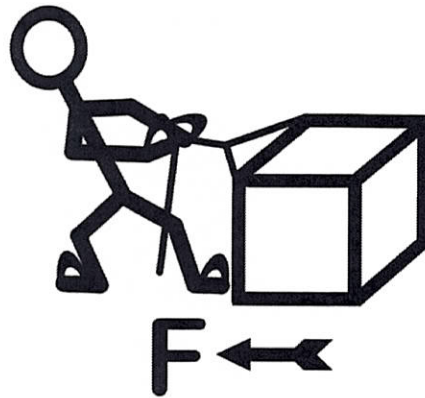
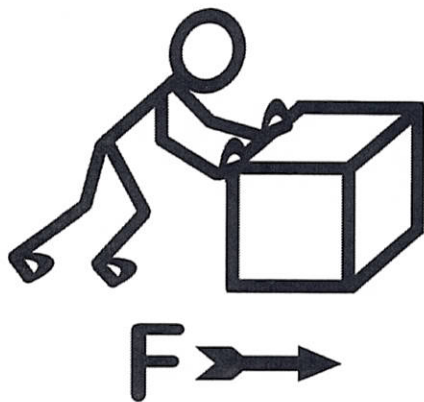


Name _____ Date _____

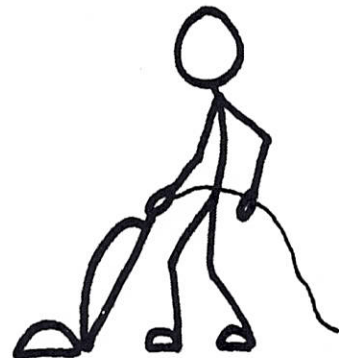
Force: Push or Pull

Force is any push or pull that is applied to an object. Any movement of an object is caused by either a push or a pull. When pushing, you are exerting force away from your body. When pulling, you are exerting force towards your body. *Exert* means to put into action.



Certain activities require a push. To throw a ball you must push it away from you. To pick up an object you must pull it towards you. Some activities require both pushing and pulling. For example, when people swim, we pull with the arms and push with the legs.

It is possible to push or pull almost any object, but you must use a specific force to accomplish a specific movement. Some objects, like wheelbarrows and buttons on video game controllers, are designed to be pushed. Some objects, like combs and ropes, are designed to be pulled. Other objects, like yo-yos and vacuum cleaners, are designed to be pushed and pulled.



Name _____ Date _____

Force: Push or Pull

Below is a list of everyday activities that involve exerting force. Write the word *push* or *pull* to indicate the type of force you would exert to do the activity. Some activities use both push and pull.

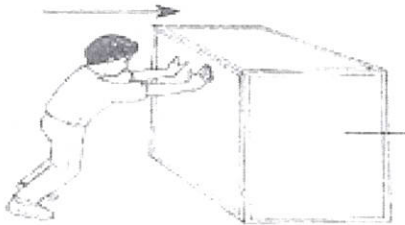
- _____ 1. kicking a ball
- _____ 2. typing on a keyboard
- _____ 3. walking
- _____ 4. writing with a pencil
- _____ 5. lifting a book
- _____ 6. swinging a baseball bat
- _____ 7. digging a hole with a shovel
- _____ 8. standing up
- _____ 9. jumping on a trampoline
- _____ 10. ringing a doorbell
- _____ 11. starting a lawnmower with a cord
- _____ 12. playing the piano

Friction

Q.1 A moving ball on a ground stops after some time. Name the force responsible for it.

.....

2. Name the Type of friction in following tow cases :



.....

.....

Out of the above two types of friction name the friction which requires less effort.

.....

3. Match the following :-

- | | |
|----------------------|--|
| i) Bird | a) Measures the force acting on an object. |
| ii) Spring Balance | b) Static friction |
| iii) Moving body | c) Lubricant |
| iv) Reduces friction | d) Drag |

4. Choose the correct option :-

i) Static friction comes to play when the object is

- | | |
|---|-------------------------------------|
| a) Rolling <input type="checkbox"/> | b) Sliding <input type="checkbox"/> |
| c) Moves from rest <input type="checkbox"/> | d) None <input type="checkbox"/> |

ii) Rolling friction comes to play when the object is.

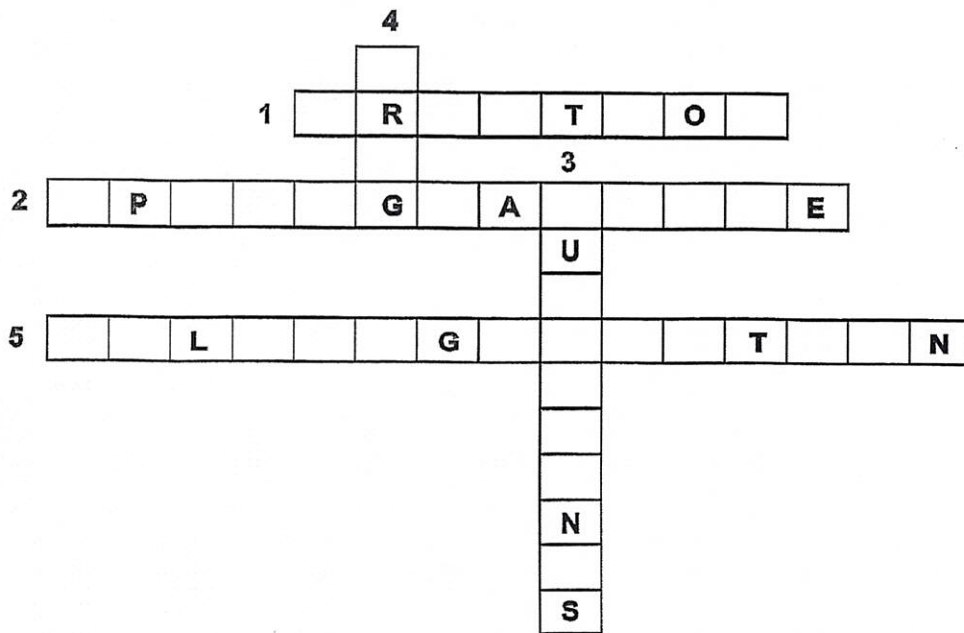
- | | |
|---|--|
| a) Rolling <input type="checkbox"/> | b) Sliding <input type="checkbox"/> |
| c) Comes to rest <input type="checkbox"/> | d) all of these <input type="checkbox"/> |

- iii) In many machines, friction is reduced by using :
- | | | | |
|-----------------|--------------------------|---------------|--------------------------|
| a) Ball-Bearing | <input type="checkbox"/> | b) Lubricants | <input type="checkbox"/> |
| c) Both a & b | <input type="checkbox"/> | d) None | <input type="checkbox"/> |
- iv) A ball is rolling in north direction, in which direction, does the frictional force act.
- | | | | |
|----------|--------------------------|----------|--------------------------|
| a) North | <input type="checkbox"/> | b) South | <input type="checkbox"/> |
| c) East | <input type="checkbox"/> | d) West | <input type="checkbox"/> |

5. Sometimes, force of friction is desirable, give three examples.

- i)
- ii)
- iii)

6. Cross-Word puzzle :-



Hints

1. Force which opposes motion.
2. The device used to measure the force acting on an object.
3. The substance which reduces friction.
4. The frictional force exerted by fluids.
5. The resistance to friction when a body rolls over the surface of another body