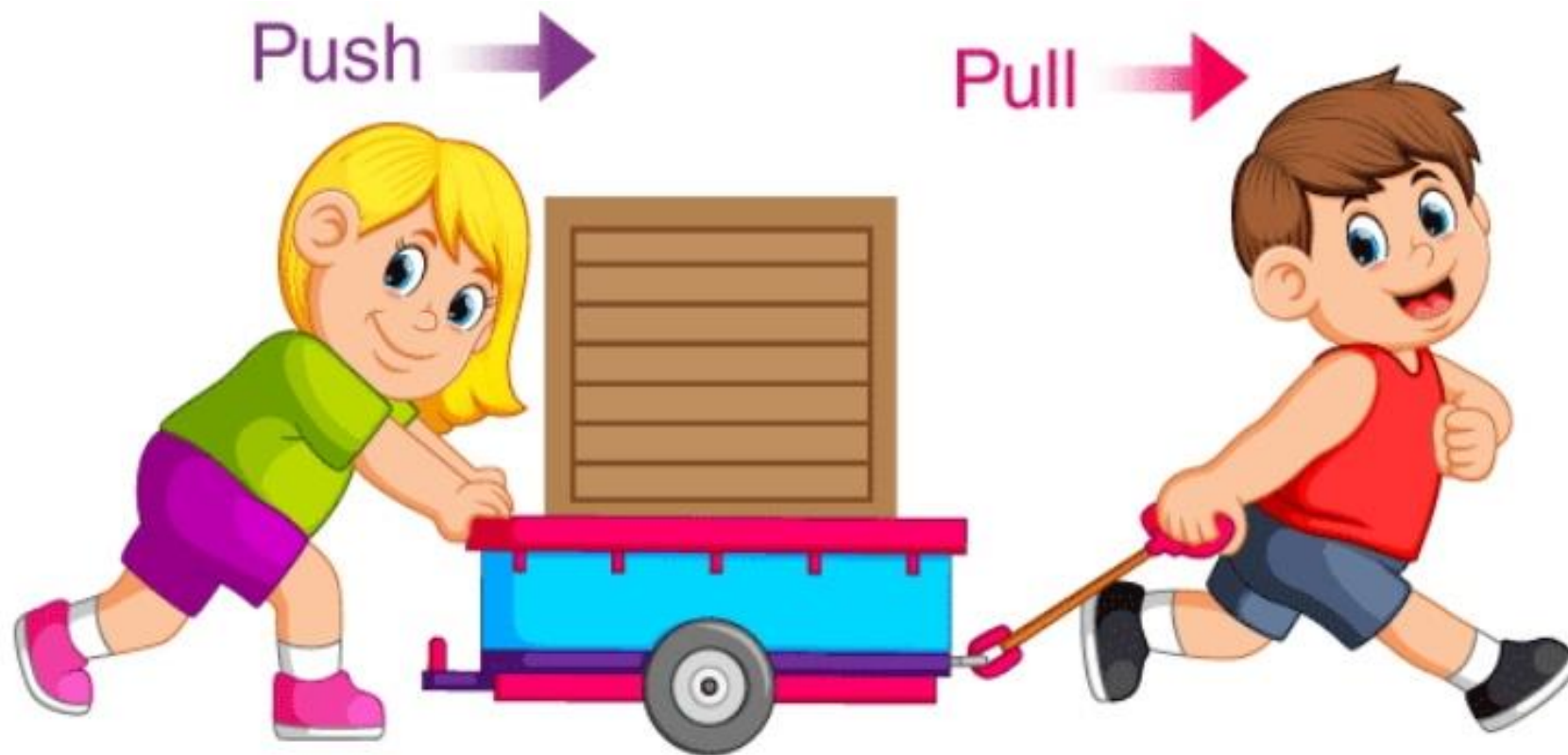


# Ch-11: Force

Force:



# Direction of force: (same or opposite)

- The direction in which an object is pushed or pulled

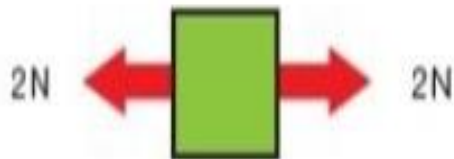

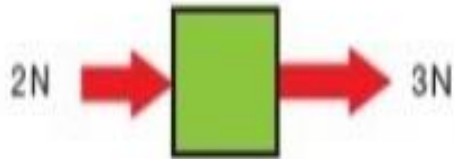
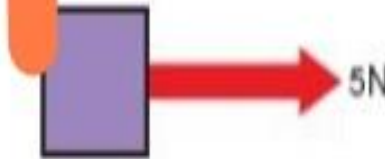
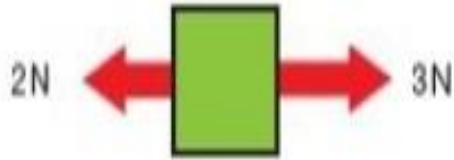
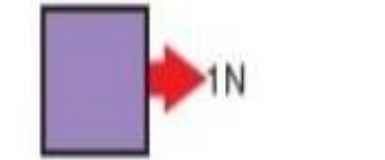
# Direction of force:

- Force applied in same direction – net force or resultant force is sum of two forces since they add with each other (Makes the work easy)
- Force applied in opposite direction – net force or resultant force is difference between two forces



# Direction of force:

- Direction – same (case i)
- Direction – In the direction of larger force.

These forces acting on a body	Give this resultant force
	
	
	

# Force:

- Strength of the force expressed in magnitude
- Force – magnitude and direction –Vector quantity
- Effect of force on the object is due to the net force acting on it

# Force – unit:

- SI unit – newton ( $1 \text{ kg m /s}^2$ )
- CGS unit – dyne
- Relation:  $1 \text{ newton} = 10^5 \text{ dyne}$

# State of motion

- Object – rest (State of rest or state of zero speed)
- Object – motion ( State of motion)
- Here, both the cases refers to state of motion



# Effects of Force:

- Force can bring change in state of motion or rest
- Force can change direction (Ex: Girl catching the ball)
- Force can change speed (Ex: Player hitting a ball with his bat)
- Force can change shape (Ex: Girl sitting on a bean bag)