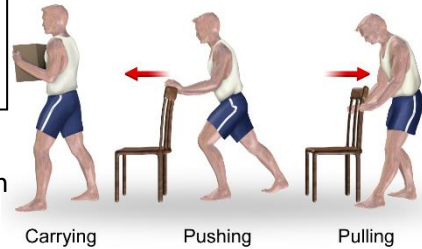




WS 9.1 FORCES IN ACTION.

1. Read the definitions and then write your answer using the word bank below.

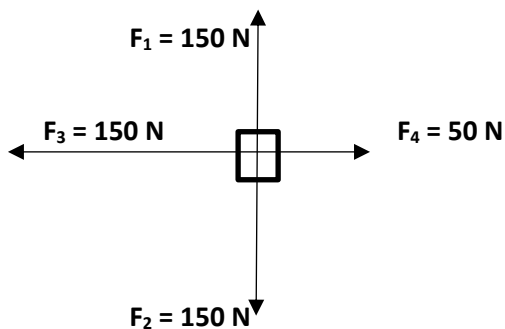
force	inertia	friction	rest
newton	gravity	motion	



- _____ A force that resists motion when objects touch
- _____ Any push or pull
- _____ The reluctance to change the velocity
- _____ Any change in position in relation to a reference frame
- _____ No change of position of an object with respect to time
- _____ The SI unit for force
- _____ Fundamental interaction which causes all things with mass to be attracted

2. An astronaut of 75 kg weights 279 N in Mars. What is the acceleration due to gravity on this planet?

3. What must be the value for net force for this object to be in equilibrium?





4. A student pedalling a bicycle applies a net force of 400 N. The mass of the rider and the bicycle is 25 kg. What is the acceleration of the bicycle and the rider?

F= _____

m= _____

a= _____



5. What is the magnitude of the acceleration that is produced when the brakes of a 2.4×10^3 kg car apply a 3.2×10^3 N force to stop the car?

6. A 1250 kg car accelerates from 75 km/h to 90 km/h in 10 s. What is the net force acting on the car?

7. A tram of 1800 kg takes 6 seconds to stop after travelling at a constant velocity of 72 km/h. Calculate the acceleration and net force acting on it.

