

From 1st Law of Motion, we know that objects will following a straight path at a constant speed if NO NET FORCE is acting on them.

Let's say there's an astronaut in deep space, that throws a ball, the balls path will follow as such...

Straight line

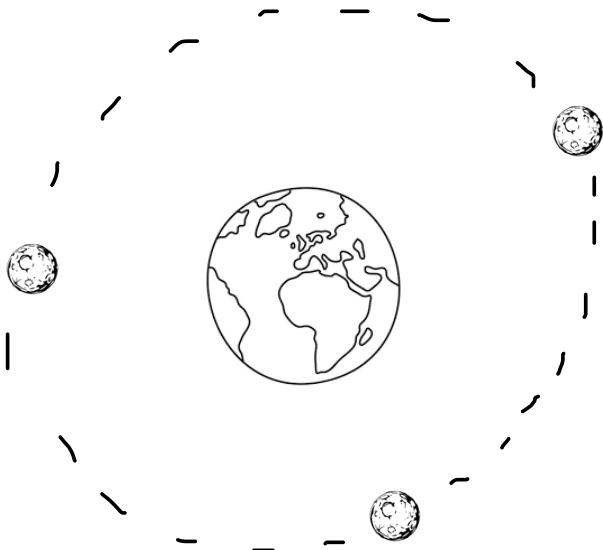
Constant speed; No speed up or slow down!



For the following situations, determine which unbalanced force is responsible for either the speed up, slow down, or change in direction! Choose from the 5 forces below!

Weight (gravity)
Normal
Friction
Tension
Drag

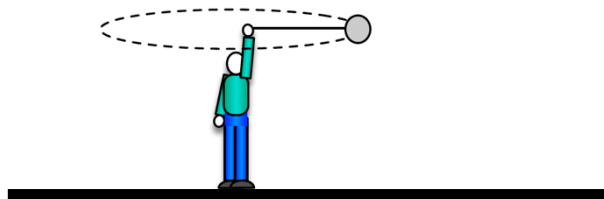
The moon orbits around the Earth.
It's going in circles around the
Earth (not a straight line)



The soccer ball rolling through the grass, slows
down and eventually comes to a halt.



The person spins the ball around their head from a rope, making it go round and round!



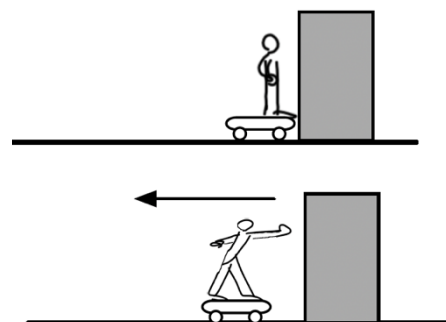
A hockey player smashes into the wall, stopping them from drifting into the stands!



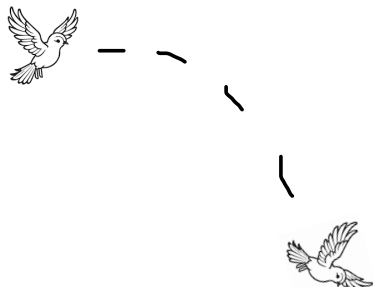
Someone swings their keys that are hanging on their lanyard around in a circle.



A person on a skateboard pushes off a wall to accelerate backwards.



A bird changes direction during its migration path



When Steph shoots a basketball, it follows a curved path to the basket, changing its vertical speed and its direction!



A wood block slows down and eventually skids to a halt after it's pushed across the table.



A gush of wind causes tumbleweed that was initially at rest to start rolling across the field.

