

# NEWTON'S 1<sup>ST</sup> LAW

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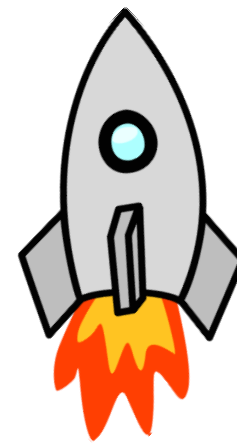
# NEWTON'S 2<sup>ND</sup> LAW

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# NEWTON'S 3<sup>RD</sup> LAW

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## EXAMPLE 1



A rocket blasting off.

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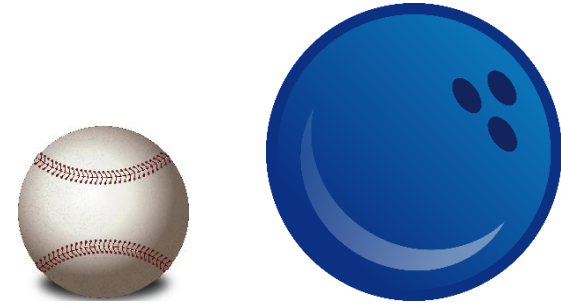
## EXAMPLE 2



A fireman turns on a hose and is knocked backwards.

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## EXAMPLE 3



It takes more force to move a bowling ball than a baseball.

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## EXAMPLE 4



A soccer ball will not move until it is kicked.

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## EXAMPLE 5



It takes less force to pull an empty wagon than a wagon with someone in it.

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## EXAMPLE 6



A bowling ball hitting pins and they fly backwards.

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## EXAMPLE 7



You are pushed back into your seat when an airplane takes off.

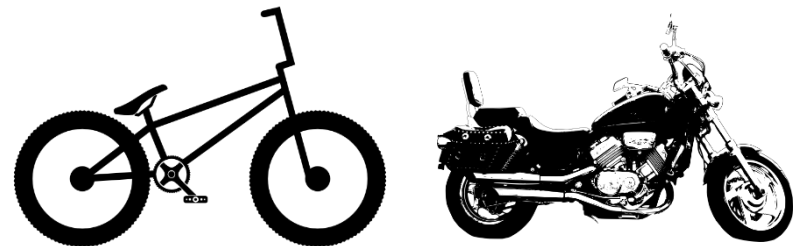
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## EXAMPLE 8

The Law of Inertia.

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## EXAMPLE 9



It takes less force to move a bicycle than a motorcycle.

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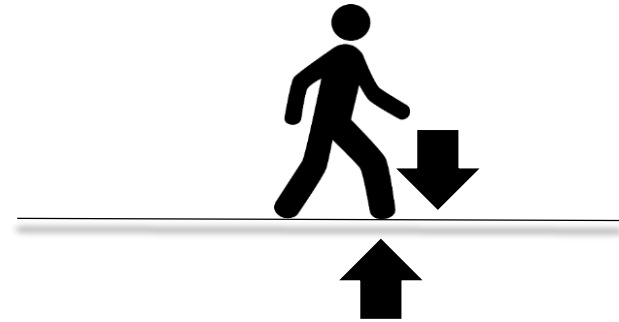
## EXAMPLE 10



The air is let out of a balloon and it flies around the room.

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## EXAMPLE 11



The floor pushes up as a person's foot pushes down.

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## EXAMPLE 12



A car accelerates faster than a truck.

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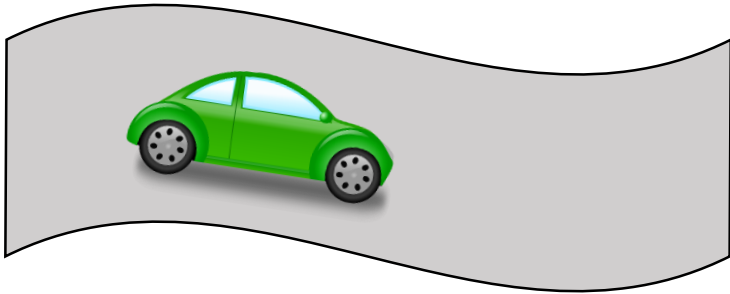
## EXAMPLE 13



A magician pulls out the tablecloth from under the dishes and they do not move.

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## EXAMPLE 14



A person's body is thrown outward around a curve.

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## EXAMPLE 15

The Law of Acceleration.

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## EXAMPLE 16



Pushing a child on a swing requires less force than pushing an adult.

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## EXAMPLE 17



A swimmer pushes back on the water and moves forward.

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## EXAMPLE 18

The Law of Action/Reaction.

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## EXAMPLE 19



Paddling a canoe.

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## EXAMPLE 20



A cannonball shot forward  
and the cannon moves back.

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## EXAMPLE 21



A pitched baseball goes faster  
than one that is gently thrown.

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## EXAMPLE 22



An ice skater pushes with more force and begins to move faster.

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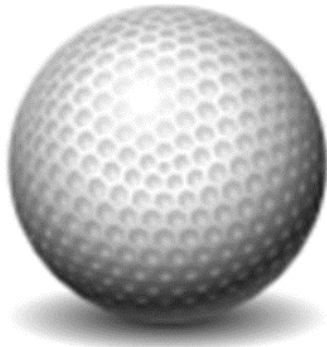
## EXAMPLE 23



A picture hanging on the wall does not move.

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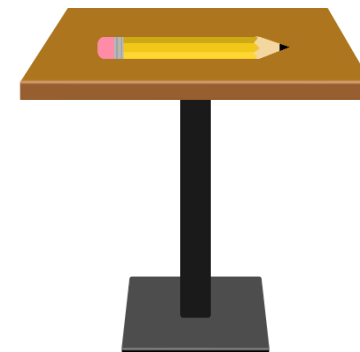
## EXAMPLE 24



A golf ball continues to roll until friction and gravity stop it.

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## EXAMPLE 25



A pencil on a table will stay there until someone picks it up.

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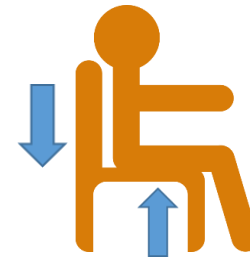
## EXAMPLE 26



A full grocery cart requires more force to push than an empty cart.

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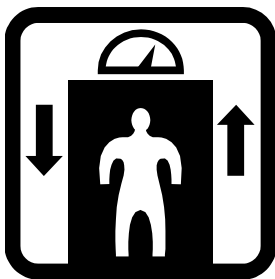
## EXAMPLE 27



Sitting in a chair you exert a force on the chair and it exerts an equal force on you.

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## EXAMPLE 28



Ascending in an elevator and blood rushes to your head when it suddenly stops.

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## EXAMPLE 29



A bird pushes down on the air with its wings in order to fly.

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## EXAMPLE 30



Several dogs pulling a sled cause it to go faster than just one dog pulling a sled.

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## EXAMPLE 31

An object at rest will remain at rest and an object in motion will remain in motion until acted upon by an unbalanced force.

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## EXAMPLE 32

The FORCE of an object is equal to its MASS multiplied by its ACCELERATION.

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## EXAMPLE 33

For every action there is an equal and opposite reaction.

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