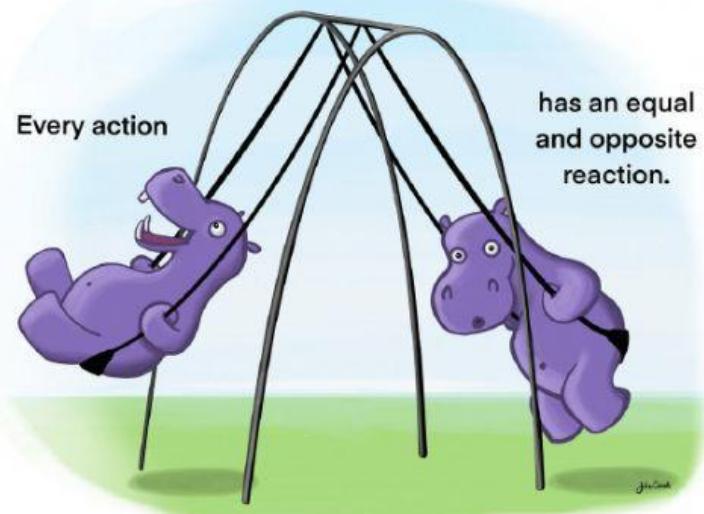


## Newton's Third Law



(1.) A gun recoils when it is fired. As the gases from the gunpowder explosion expand, the gun pushes the bullet forwards and the bullet pushes the gun backwards. How do these two forces compare?

(2.) The acceleration of the recoiling gun is

(3.) A high school student hits a nail with a hammer. During the collision, there is a force

(4.) An unfortunate bug splatters against your face as you run the 100 meter dash. Compared to the force of your face on the bug, the force of the bug on your face is

(5.) An unfortunate bug splatters against your face as you run the 100 meter dash. Compared to the deceleration of your face, the deceleration of the bug is

(6.) A Mack truck and a Volkswagen Bug traveling at the same speed have a head-on collision. The vehicle to undergo the greater change in velocity will be the