

The X-axis is essentially the position of the ball at its highest potential energy point for that series of trials. The Y-axis is essentially a measure of kinetic energy for each particular series of trials. As potential energy increases, so does the resulting kinetic energy. But, the numbers are not equal. While potential energy transforms into kinetic energy once the ball is dropped, not all of the ball's potential energy is transformed into kinetic energy. Some of it goes toward sound energy as we hear the bounce of the ball. Some energy is expended in response to gravity and air friction. Some energy is lost to unusable heat energy.