

Rolling cylinders

Consider the following experiment.

Two metal cylinders, of identical external size and mass and painted the same colour, are rolled down an inclined plane.

If you drop the cylinders, they hit the floor at the same time. But, if you roll them down the plane, one of the cylinders always reaches the bottom of the plane before the other cylinder.

Can you explain what is going on here? There must be some difference between the cylinders but what is it and why does it produce this result?

Email me with your solution to this puzzle and I will confirm if you are right or not.