

## Greek Waiter's Tray Demonstration-Explanation

When the tray and the beaker is swung around in a circle, the person swinging the tray has to maintain a \_\_\_\_\_ force inward toward the center of the circle. As we learned previously, this is called \_\_\_\_\_ force, and it depends on the \_\_\_\_\_ of the object, its \_\_\_\_\_ and the \_\_\_\_\_ from the center of rotation (in this case it's the person's shoulder joint). If any of these variables is \_\_\_\_\_, the centripetal force also \_\_\_\_\_.

The beaker behaves as if an \_\_\_\_\_ force was holding it against the tray. Though there really isn't an outward force, it's often referred to as \_\_\_\_\_ (away from a center) \_\_\_\_\_. This is due to the \_\_\_\_\_ the beaker now has because it's being rotated and is exactly \_\_\_\_\_ to and \_\_\_\_\_ in direction to the centripetal force.

