

Center of Gravity Worksheet

Demonstration 1. Center of Gravity of an Irregular Polygon

1. Define center of gravity.
2. Explain how the center of gravity of the polygon was determined.
3. Describe how the polygon spins when it rotates about its center of gravity.
4. Describe how the polygon spins when it rotates at a point other than the center of gravity.

Demonstration 2. Bottle Balance Beam

5. When a person is standing on two feet, where is his/her center of gravity?
6. Where is his/her center of gravity when standing on one foot?
7. Why do football players on the line try to “stay low to the ground”?

Demonstration 3. Finger Balance

8. How did adding a heavy object to the end of the apparatus make it balance on a finger?

9. Draw the position of the balanced Finger Balance and tube and indicate on the drawing the location of the center of gravity.

Demonstration 4. Center of Gravity Toss

10. Describe the motion and “travel” of the irregularly shaped object after it was tossed into the air.

11. When the irregularly shaped foam sheet was spun and tossed into the air, what was the shape of the path that the center of mass followed? Draw the shape the center of mass follows.