***The Conservation of Momentum and Collisions***

Name:

**Analysis and Conclusion**

Complete the table below for each collision. You will be drawing a diagram of the three collisions you studied. This diagram can be just boxes and arrows. Make sure to include the data that is requested as well.

***Collision 1***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mass** | **Before Collision** | | **After Collision** | |
| Green |  | Green |  |
| Purple |  | Purple |  |
| **Velocity** | Green |  | Green |  |
| Purple |  | Purple |  |
| **Momentum** | Green |  | Green |  |
| Purple |  | Purple |  |
| TOTAL |  | TOTAL |  |
| **Diagram** | *Before Collision* | | *After Collision* | |
|  |  | |  | |

1. Explain what happened to the masses of the two cars before and after the collision.
2. Explain what happened to the velocity of the two cars before and after the collision.
3. Explain what happened to the momentum of the two cars before and after the collision.
4. What did you observe about the total momentum before and after the collision?

***Collision 2***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mass** | **Before Collision** | | **After Collision** | |
| Green |  | Green |  |
| Purple |  | Purple |  |
| **Velocity** | Green |  | Green |  |
| Purple |  | Purple |  |
| **Momentum** | Green |  | Green |  |
| Purple |  | Purple |  |
| TOTAL |  | TOTAL |  |
| **Diagram** | *Before Collision* | | *After Collision* | |
|  |  | |  | |

1. Explain what happened to the masses of the two cars before and after the collision.
2. Explain what happened to the velocity of the two cars before and after the collision.
3. Explain what happened to the momentum of the two cars before and after the collision.
4. What did you observe about the total momentum before and after the collision?