

Momentum Worksheet

Name _____

True or False?

- _____ 1. Momentum is not equal to the mass of an object divided by its velocity.
- _____ 2. The momentum of an object can change.
- _____ 3. Two objects with the same mass will always have the same momentum.
- _____ 4. All moving objects don't have momentum.
- _____ 5. When an object speeds up, it gains momentum.
- _____ 6. Objects with different masses can't have the same momentum.
- _____ 7. Direction does not matter when you are measuring momentum.
- _____ 8. Momentum can be transferred from one object to another.
- _____ 9. When objects collide, some momentum is lost.
- _____ 10. A tiny bullet can have more momentum than a huge truck.

Given the following data, solve for momentum.

| Object | Mass (kg) | Velocity (m/s) | Momentum (kg-m/s) |
|-----------------|-----------|----------------|-------------------|
| Bird | .04 | 19 | .76 |
| Football player | 100 | 10 | |
| Skier | 60 | 20 | |
| Bullet | .004 | 600 | |
| Frog | .9 | 12 | |
| Meteorite | .1 | 1,000 | |
| Baseball | .14 | 30 | |
| Wagon | 2 | 3 | |
| Satellite | 3,000 | 8,000 | |

1. List the objects from least momentum to greatest.

2. Does the order of these objects surprise you? Why or why not?

3. Do you think that these objects would always be placed in the same order according to momentum? Why or why not?