**Quiz Practice: Newton’s Laws Vocab + Concepts**

1. What are the three ways you can make your car accelerate?
2. What is a net force?
3. When all forces acting on an object are balanced, will the object accelerate?
4. What physics term is the resistance to acceleration?
5. In what direction does friction act? Opposite the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ force.
6. To make an object accelerate, the forces on it need to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. For an object to be still or move at a constant velocity, the forces on it need to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. Whenever two things collide, Newton’s 3rd Law says that the forces Object 1 and Object 2 exert on each other are always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. A kicker kicks a football with an applied force of 250N. How hard does the ball push back on his foot?

**Word Problems**

10. What does each variable stand for in this equation?

11. Brett and Kempton are having a tug of war over the last bottle of Pepsi. Brett pulls to the left with a force of 50 N, and Kempton pulls to the right with 75 N.

A) What is the net force acting on the Pepsi?

B) What direction does the net force act? (up, down, left, right, or none)

C) The bottle of Pepsi has a mass of 2 kg. Solve for its acceleration.

D) In what direction will the Pepsi bottle accelerate? (up, down, left, right, or none)

12. How much net force do you have to apply to a 10 kg to make it speed up at 2 m/s2?