QUIZIZZ

NAME : _____

CLASS : _____

DATE : _____

Newton's Third Law of Motion

14 Questions

1. Newton's Third Law States...

☐ a) Objects in motion stay in motion and objects at rest stay at rest

☐ b) Force is equal to mass times acceleration

☐ c) For each action there is an equal and opposite reaction

2. An archer shoots an arrow. The action force is the bowstring against the arrow, the reaction force is...

☐ a) Air resistance against the bow

☐ b) the arrow's push against the bowstring

☐ c) the grip of the archer's hand on the bow

3. A baseball player bats a ball with a force of 1,000 N. The ball exerts a reaction force (without any additional forces action on it) against the bat of...

☐ a) Less than 1, 000 N

☐ b) 1,000 N

☐ c) More than 1,000 N

4. A rocket pushes exhaust 10, 000 N. Without any other forces acting on the rocket, how much force does the rocket go forward?

☐ a) 15,000 N

☐ b) 1,000 N

☐ c) 10, 000 N

5. What is the reaction force to a foot pushing down on the floor?

☐ a) The foot going through the floor

☐ b) The floor pushing back against the foot

☐ c) The floor breaking to the foot

6. According to Newton's Third law the strength or magnitude of forces will be...

☐ a) smaller ☐ b) equal

☐ c) larger

7. A swimmer pushes on the water and the water pushes on the hand and the swimmer moves forward. What is the **ACTION** force?

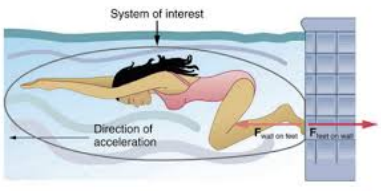
☐ a) Swimmer pushes on the water ☐ b) the water pushes on the hand and the swimmer moves forward

8. A swimmer pushes on the water and the water pushes on the hand and the swimmer moves forward. What is the **REACTION** force?

☐ a) Swimmer pushes on the water ☐ b) the water pushes on the hand and the swimmer moves forward

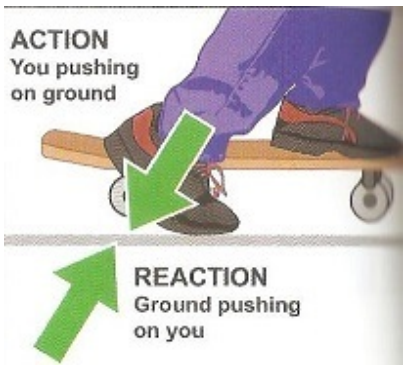
9. A bowling ball hits the pins and the pins fall over. What is the **ACTION** force?

☐ a) Bowling ball hitting pins ☐ b) Pins falling over

10. 

The swimmer pushes off of the wall of the pool and moves forward. What is the **ACTION** in this example?

☐ a) Swimmer pushes off the wall of the pool ☐ b) Swimmer moves forward

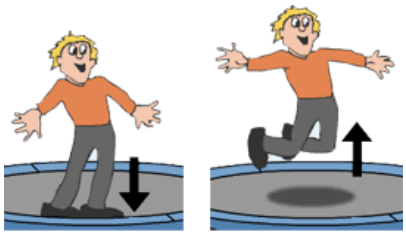
11. 

If you apply MORE force to the ground what happens to the ground pushing on you?

☐ a) The force remains the same

☐ b) The force increases

☐ c) The force decreases

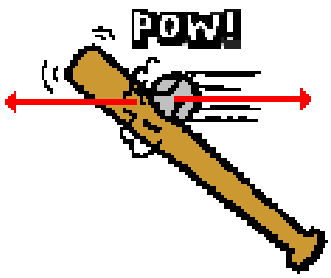
12. 

If the gymnast decreases the force they exerts on the trampoline, what will the reaction be?

☐ a) The gymnast will be pushed back by the trampoline with more force and go higher into the air

☐ b) The gymnast will be pushed back by the trampoline with less force and not go as high into the air

☐ c) No change will happen to the gymnast

13. 

The baseball player wants to hit a homerun. What does he have to do to the force they exert on the ball?

☐ a) The baseball player will need to apply more force to the bat swinging at the ball

☐ b) The baseball player will need to apply less force to the bat swinging at the ball

☐ c) The baseball player should change nothing about his swing

14. 

Katniss Everdeen applies 20 N of force back on her bow. What happens to the arrow when she lets go?

☐ a) The arrow goes backwards

☐ b) The arrow goes forwards with 20 N

☐ c) The arrow goes forwards with 30 N

☐ d) The arrow goes forwards with 0 N

Answer Key

1. c
2. b
3. b
4. c
5. b
6. b
7. a
8. b
9. a
10. a
11. b
12. b
13. a
14. b