



# ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

- **Subject- Physics** Worksheet- 16 **Class – IX**
- **Date-16.04.2020** **1<sup>st</sup>Term**
- **Topic – Newton's Third Law of Motion**

• Question 1

Q. When a heavy football player and a light one run into each other, who exerts more force?

[answer choices](#)

The heavy one

The light one

They are equal

there is no such thing as force

• Question 2

Q. When you hold an apple above your head, how many force pairs act on the apple?

[answer choices](#)

1

2

3

4

• Question 3

Q. Suppose two carts, one twice as massive as the other, fly apart when the compressed spring that joins them is released. How fast does the heavier cart roll compared with the lighter cart?

[answer choices](#)

twice as fast

the same

half as fast

• Question 4

Q. A bus hits a bug and the bug splatters on the windshield, which force is greater?

[answer choices](#)

The Bus

The Bug

They're the same

Gravity acting on the bus

• Question 5

Q. When Ronda Rousey got kicked in the face, What is the interaction pair?

[answer choices](#)

The foot and the face

Ronda Rousey and media criticism

The foot and the air flow

Ronda Rousey and the floor

• Question 6

Q. Newton's third law states that any action will have a(n) \_\_\_\_\_ and \_\_\_\_\_ reaction

[answer choices](#)

Equal and similar

Equal and opposite

Equal and different

Greater and opposite

• Question 7

Q. A book rests on a table. The force of gravity pulls down on the book with a force of 20 newtons. What prevents the books from accelerating downward at  $9.8 \text{ m/sec}^2$

[answer choices](#)

The table presses back up on the book with an equal and opposite force of 20 newtons.

The table presses back up on the book with a force greater than 20 newtons.

The table and the book together are accelerating downwards at  $9.8 \text{ m/sec}^2$

The inertia of the book holds it up

• Question 8

Q. You hit a wall with a stick. The equal but opposite reaction is \_\_\_\_\_

[answer choices](#)

the wall pushes against you

the stick pushes against you

you push against the stick

the wall pushes against the stick

- Question 9

Q. Friction and gravity are both examples of a force.

[answer choices](#)

True

False

- Question 10

Q. Suppose two carts, one twice as massive as the other, fly apart when the compressed spring that joins them is released. How fast does the lighter cart roll compared with the heavier cart?

[answer choices](#)

twice as fast

the same

half as fast

- Question 11

Q. A science book with a mass of 2.8 kg is pushed along a table with a net force of 1 N. What is the book's acceleration?

[answer choices](#)

0.28 m/s<sup>2</sup>

0.32 m/s<sup>2</sup>

0.36 m/s<sup>2</sup>

0.38 m/s<sup>2</sup>

- Question 12

Q. When the same force is applied to both the male African elephant and the female Asian elephant, their acceleration is different. Why?

[answer choices](#)

Male and female elephants have different heights.

The male elephant has more mass

The female elephant has probably eaten more

The male elephant has less mass

- Question 13

Q. This equation goes with which law?

[answer choices](#)

Newton's first law of motion

Newton's second law of motion

Newton's third law of motion

None of these

• Question 14

Q. What is the 3rd Law of Motion?

answer choices

A body at rest will stay at rest, and a body in motion will stay in motion unless acted upon by an external force.

The force acting on an object is equal to the mass of that object times its acceleration.

The principle that 2 particles attract each other with forces directly proportional to the product of their masses divided by the square root of the distance between them.

For every action, there is an equal and opposite reaction.

• Question 15

Q. Who came up with the 3rd Law of Motion?

answer choices

Isaac Newton

John Wayne

Kanye West

Albert Einstein

Teacher- PiyaliHalder