1. State Newton's 2nd law of Motion AKA the Law of Acceleration

The acceleration of an object depends on the mass of the object and the force applied

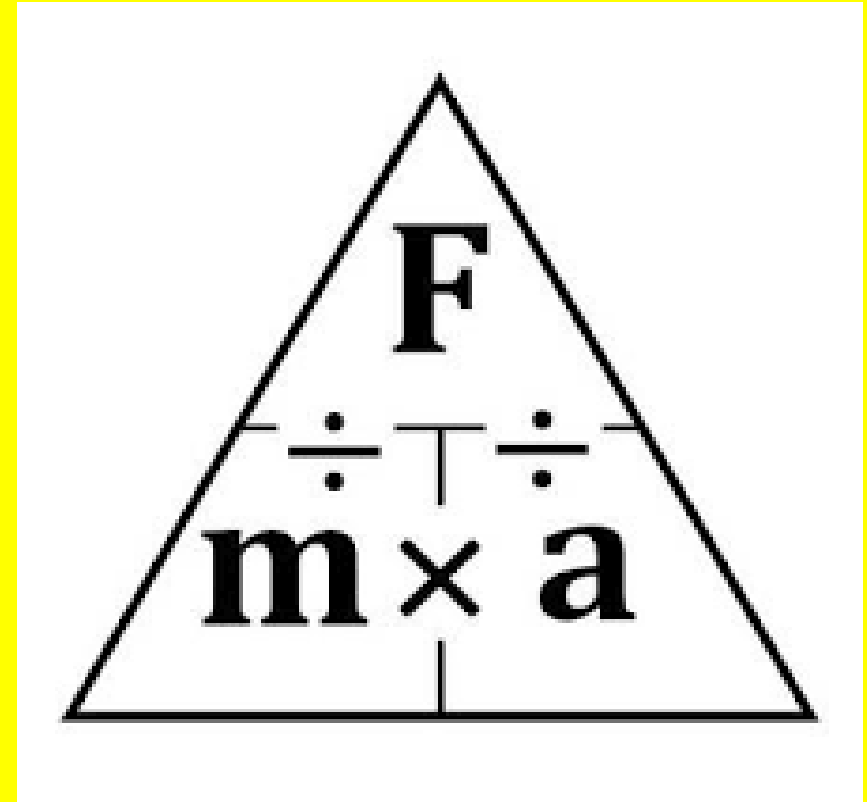The greater the force, the greater the acceleration

The larger the mass, the greater the force required to accelerate an object.

2. What formula do we use to calculate the force acted on by an object?

F=ma

3. Draw a F=ma Triangle

4. What is mass? (you should know this one)

The amount of matter in an object

5. If the same force is applies to a large mass and a small mass then.....

The object with the smaller mass will travel farther

6. If you have 2 objects that are the same mass and you apply a small force to one object and a large force to the other then......

The object with the large force applied will go farther

7. What is acceleration?

A change in speed/direction or both
m/s^2 is the unit it is measured in

8. List 3 examples of Newton's 2nd law

1. A car has less mass and requires less force to stop than a truck
2. A small child would be easier to push on a swing than an adult
3. A baseball accelerates farther when a greater force is applied

9. Mrs. Curry & Ms. Sadler decided to race remote control cars down the hallway. They both have trucks with the same type of engine & mass. Someone accidentally dropped a 100g mass in the back on Ms Sadler's truck before the race. Use your understanding of Newton's second law to explain who would win the race.

Mrs. Curry's car because it has less mass than Ms. Sadler's car and has greater acceleration

10. Using Newton's 2nd law; describe why it is harder to push a shopping cart full of groceries than one that is empty.

The cart that is full has more mass and requires more force to push it

11. How much force is needed to accelerate a 200kg motorcycle 4 m/s?

12. What is the acceleration of a 50 kg mass being pulled by a dogsled team with a force of 100 N?