

Newton's 1st Law

If there is no resultant force on an object the object will either remain stationary or continue to move with a constant velocity.

Newton's 2nd Law

If there is a resultant force on an object the object will move with an acceleration in the direction of the resultant force.

Formula: $F = ma$

Newton's 2nd Law in Simple Words for Year 12 Maths Work

- A resultant force on a stationary object will make the object start moving in the direction of the resultant force with an acceleration given by the formula $F = ma$.
- A forward resultant force on a moving object will make the object continue to move in the forward direction with an acceleration given by the formula $F = ma$.
- A backward resultant force on a moving object will make the object continue to move in the forward direction with a deceleration. You may substitute the resultant force as a negative value in the formula $F = ma$, which will then give you a negative acceleration (deceleration).