

Dynamics Flashcards For Kids PDF

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What is the definition of dynamics?

Dynamics is the branch of mechanics that deals with the motion of objects and the forces that affect that motion.

What are the two main branches of dynamics?

The two main branches of dynamics are kinematics and kinetics.

What does kinematics study?

Kinematics studies the motion of objects without considering the forces that cause the motion.

What does kinetics study?

Kinetics studies the forces and torques that cause motion.

What is Newton's first law of motion?

Newton's first law states that an object at rest will remain at rest, and an object in motion will remain in motion at a constant velocity unless acted upon by a net external force.

What is Newton's second law of motion?

Newton's second law states that the acceleration of an object is directly proportional to the net force acting on it and inversely proportional to its mass.

What is Newton's third law of motion?

Newton's third law states that for every action, there is an equal and opposite reaction.

What is the formula for calculating force?

The formula for calculating force is $F = m \cdot a$, where F is force, m is mass, and a is acceleration.

What is the unit of force in the International System of Units (SI)?

The unit of force in the SI system is the Newton (N).

What is inertia?

Inertia is the property of an object to resist changes in its state of motion.

What factors affect the motion of an object?

The factors that affect the motion of an object include mass, force, friction, and the angle of application of the force.

