PHYSICS IN MOTION

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Unit 3A
Newton's Laws Overview

Note-Taking Guide and Questions to Consider

Name:

Date:

Main Ideas, Key Points, Questions:

After watching the video segment, write down key points, main ideas, and big questions.

Objective(s):

- *Recognize how Newton's three laws are applied to everyday scenarios, with regards to inertia, net force, and forces always occurring in pairs.*
- *Use Newton's second law to make calculations involving net force, mass, and acceleration.*

Notes:

During the video segment, use words, phrases, or drawings to take notes.

Summary:

After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself: "If I was going to explain this to someone else, what would I say?"

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Answer the following.

1. When an object experiences an unbalanced force, how must it be moving?

   _____

2. If an object is being pulled by two forces, one 4 N to the left and the other 2 N to the right, what is the net force acting on the object?

   _____

   _____

3. Define Newton's first law in your own words.

   _____

   _____

4. What is the common name for Newton's first law?

   _____

5. What physical quantity that can be measured relates directly to inertia?

   _____

6. If two objects experience the same net force, but they have different masses, which object will accelerate at a greater rate — the lighter or heavier object?

   _____

   _____

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Answer the following.

7. If two different net forces are applied to the same object at different times, which one will cause the object to accelerate at a greater rate — the larger or smaller net force?

_____

_____

8. What are the two types of motion an object can experience when acted upon by balanced forces?

_____

_____

9. What is the equation for Newton's second law?

10. Define Newton's third law in your own words, and give an example.

_____

_____

11. Explain the action-reaction pair involved when a person walks down a sidewalk.

_____

_____