



Which formula represents the relationship between force, power, and velocity?

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Force = Power x Velocity

Force = Power / Velocity

Force = Power + Velocity

Force = Power - Velocity

Show Answer...

**Correct Answer: B (Force = Power / Velocity)**

# Relationship Between Force, Power, and Velocity

## Introduction

In physics, force, power, and velocity are interconnected concepts that describe the motion and interaction of objects. Understanding their relationship is fundamental in various scientific and engineering applications.

## The Correct Formula

The correct formula representing the relationship between force, power, and velocity is "B) Force = Power / Velocity." This formula states that force is equal to power divided by velocity.

## Explanation

- Force (F) represents the push or pull applied to an object and is measured in newtons (N).
- Power (P) measures the rate at which work is done or energy is transferred and is typically measured in watts (W).
- Velocity (v) is the speed of an object in a specific direction and is measured in meters per second (m/s).

The formula "Force = Power / Velocity" indicates that force is inversely proportional to velocity. In other words, when power remains constant, increasing velocity results in a decrease in force, and vice versa.



Which formula represents the relationship between force, power, and velocity?

## Conclusion

Understanding the relationship between force, power, and velocity is essential in various scientific and engineering contexts, including mechanics, energy transfer, and the design of machinery. The formula “Force = Power / Velocity” helps describe how these factors interact and influence the motion and behavior of objects.