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Crash Course Physics #2: Derivatives

Name: _____ Date: _____

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1. The language of physics is _____.
2. Velocity is the _____ of position.
3. Acceleration is the _____ of velocity.
4. The mathematical tool used to describe how things change is _____.
5. A _____ is a mathematical way to describe how a function changes at a specific point.
6. The concept of _____ helps us determine what a function is approaching as intervals become smaller.
7. The equation $x = t^2$ shows a relationship between position and _____.
8. The _____ of $x = t^2$ is $2t$.
9. The shortcut rule used to find derivatives of power functions is called the _____ Rule.
10. The derivative of $t^{1/2}$ is _____ to the negative one-half.
11. The derivative of $\sin(x)$ is _____.
12. The derivative of e^x is _____.
13. Trigonometry is useful in physics for calculating sides and angles in _____ triangles.
14. The Greek letter used to represent change, like in "change in time," is _____.
15. While derivatives can help you go from position to velocity, _____ help you do the reverse.

Crash Course Physics #2: Derivatives KEY

1. The language of physics is **mathematics**.
2. Velocity is the **derivative** of position.
3. Acceleration is the **derivative** of velocity.
4. The mathematical tool used to describe how things change is **calculus**.
5. A **derivative** is a mathematical way to describe how a function changes at a specific point.
6. The concept of **limits** helps us determine what a function is approaching as intervals become smaller.
7. The equation $x = t^2$ shows a relationship between position and **time**.
8. The **derivative** of $x = t^2$ is $2t$.
9. The shortcut rule used to find derivatives of power functions is called the **Power Rule**.
10. The derivative of $t^{1/2}$ is $\frac{1}{2}t$ to the negative one-half.
11. The derivative of $\sin(x)$ is $\cos(x)$.
12. The derivative of e^x is e^x .
13. Trigonometry is useful in physics for calculating sides and angles in **right** triangles.
14. The Greek letter used to represent change, like in "change in time," is **delta**.
15. While derivatives can help you go from position to velocity, **integrals** help you do the reverse.

15 Questions

Answer Key Included

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