

1.0 - Kinematics - Success Criteria



PHYSICS

KINEMATICS - SUCCESS CRITERIA

Success Criteria

What is the rule for adding vectors?

- Understand that an object's state of motion is tied to either a Frame of Reference or a defined Rest Position.
- A Significant Digit is any integer in a stated value (except leading zeros)
- Understand the metric system prefixes and be able to convert units.
- Understand the concepts of Distance, Speed and Time.
- Know the mathematical relationship between these variables and how to use it to solve for a missing variable.
- What is a D-T graph?
- What does the SLOPE mean on a D-T Graph?
- What is the relationship between slope and speed?
- Is it possible to have a vertical line on an D-T Graph?
- What does a horizontal slope on a D-T Graph mean?
- What is happening if the D-T Graph curves?
- What is the difference between Scalars and Vectors?
- What is the difference between Distance and Displacement?
- What is the difference between Speed and Velocity?
- What is the rule for adding vectors?
- When solving algebraically, why is it important to define which direction is positive?
- Can you draw a vector diagram to illustrate solving vectors in 2D?
- Are you able to use Pythagorean Theorem and Primary Trig Ratios to calculate Resultant Displacement?
- Are you able to use Sine Law and Cosine Law to calculate Resultant Displacement?
- What is another word for negative acceleration?
- What is Δv ?
- Can you rearrange the acceleration formula to find v_1 or v_2 ?
- How does a VT graph relate to a DT graph?
- What does the slope on a VT graph represent?
- What does the area under the VT graph represent?
- What would a horizontal line on a VT graph represent?
- What would a positive slope represent on a VT graph?
- What would a negative slope represent on a VT graph?
- What would a curved line represent on a VT graph?
- Understand the empirical nature of gravity
- Know the acceleration due to gravity on Earth is 9.81m/s^2
- Be able to solve problems involving gravity using various equations