

AP Physics 1 Exam

Task Verbs – Free-response questions

Verb	Task (What you should do)
Calculate	Perform mathematical steps to arrive at a final answer, including algebraic expressions, properly substituted numbers, and correct labeling of units and significant figures. Also phrased as “What is?”
Compare	Provide a description or explanation of similarities and/or differences.
Derive	Perform a series of mathematical steps using equations or laws to arrive at a final answer.
Describe	Provide the relevant characteristics of a specified topic.
Determine	Make a decision or arrive at a conclusion after reasoning, observation, or applying mathematical routines (calculations).
Estimate	Roughly calculate numerical quantities, values (greater than, equal to, less than), or signs (negative, positive) of quantities based on experimental evidence or provided data. When making estimations, showing steps in calculations is not required.
Explain	Provide information about how or why a relationship, pattern, position, situation, or outcome occurs, using evidence and/or reasoning to support or qualify a claim. Explain “how” typically requires analyzing the relationship, position, situation, or outcome; whereas, explain “why” typically requires analysis of motivations or reasons for the relationship, pattern, position, situation, or outcome.
Justify	Provide evidence to support, qualify, or defend a claim; and/or provide reasoning to explain how that evidence supports or qualifies the claim.
Label	Provide labels indicating unit, scale, and/or components in a diagram, graph, model, or representation.
Plot	Draw data points in a graph using a given scale or indicating the scale and units, demonstrating consistency between different types of representations.
Sketch/Draw	Create a diagram, graph, representation, or model that illustrates or explains relationships or phenomena, demonstrating consistency between different types of representations. Labels may or may not be required.
State/Indicate/Circle	Indicate or provide information about a specified topic, without elaboration or explanation. Also phrased as “What?” or “Would?” interrogatory questions.
Verify	Confirm that the conditions of a scientific definition, law, theorem, or test are met in order to explain why it applies in a given situation. Also, use empirical data, observations, tests, or experiments to prove, confirm, and/or justify a hypothesis.