Task Verbs Used in Free-Response Questions

The following task verbs are commonly used in the free-response questions.

Calculate: Perform mathematical steps to arrive at a final answer, including algebraic expressions, properly substituted numbers, and correct labeling of units and significant figures.

Compare: Provide a description or explanation of similarities and/or differences.

Derive: Starting with a fundamental law or relationship, perform a series of mathematical steps 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).

Draw: Create a diagram or schematic that illustrates relationships, depicts physical objects, or demonstrates consistency between different types of representation. Labels may or may not be required.

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 are not required.

Indicate: Provide information about a specified topic, without elaboration or explanation.

Justify: Provide qualitative reasoning beyond mathematical derivations or expressions to support, qualify, or defend a 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.

Rank: Arrange quantities in relation to each other, typically by size or magnitude.

Sketch: Create a graph, representation, or model that illustrates relationships or phenomena, demonstrating consistency between different types of representations. Labels may or may not be required.

Verify: Confirm that the conditions of a scientific definition, law, theorem, or test are met 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.