

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.

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.

Explain: Provide information about how or why a relationship, process, pattern, position, situation, or outcome occurs, using evidence and/or reasoning to support or qualify a claim. Explain "how" typically requires analyzing the relationship, process, pattern, position, situation, or outcome; whereas, explain "why" typically requires analysis of motivations or reasons for the relationship, process, pattern, position, situation, or outcome. Also phrased as "give one reason."

Identify/Indicate/Circle: Indicate or provide information about a specified topic in words or by circling given information. Also phrased as "What is?" or "Which?" or other interrogatory words.

Justify: Provide evidence to support, qualify, or defend a claim and/or provide reasoning to explain how that evidence supports or qualifies the claim.

Make a claim: Make an assertion that is based on evidence or knowledge.

Predict/Make a prediction: Predict the causes or effects of a change in, or disruption to, one or more components in a relationship, pattern, process, or system.

Represent/Draw/Write an Equation/Complete a Diagram: Use appropriate graphs, symbols, words, and/or models to describe phenomena, characteristics, and/or relationships.