

LOS Command Words

The reading specific Learning Outcome Statements (LOS) contained in the study sessions are carefully designed to indicate what you should learn from each assignment. Although the format of the exam may not lend itself to using the following command words in the actual questions, you should be able to answer the exam questions if you can successfully accomplish the learning outcomes described by the command words in the LOS. The CFA® Program and CIPM® Program make use of the seventeen official command words defined below. The definitions explain only those senses in which the command word may be used in the CFA Program and CIPM Program LOS items; other senses, possibly relevant in other contexts, are not given.

Analyze *Definition:* to examine the constituent parts of something and how the parts relate to each other and to the whole

Explanation: **Analyze** asks you to be able to take apart something for study (e.g., a financial statement or an investment strategy) in order to understand the whole in full detail. In the first example of use below, the phrase “including ...” highlights points that must be included in an analysis.

Examples:

- analyze bottom-up active strategies, including their rationale and associated processes
- analyze the effects of currency movements on portfolio risk and return

Calculate *Definition:* to compute, to determine by mathematical processes

Explanation: This command word asks you to be able to show that you can find a correct numerical value for a quantity of interest, such as a rate of return, a present value, or a cost of capital. When the numerical value is not found using math but by some other means **determine** may replace **calculate**. **Calculate** is frequently used in the phrase “calculate and interpret,” in which **interpret** addresses the ability to explain verbally the numerical result.

Examples:

- calculate and interpret the cost of equity capital using the capital asset pricing model
- calculate and interpret the leverage ratio

Compare *Definition:* to state the similarities and differences between

Explanation: **Compare** asks you to be able to explain how two (or more) things are similar and how they differ. **Compare** subsumes the ability to **describe** and **explain** each thing individually. In the first example, the phrase “including ...” highlights points that are expected to be included in a comparison.

Examples:

- compare inflation measures, including their uses and limitations
- compare share repurchase methods

Contrast *Definition:* to state the differences between

Explanation: **Contrast**, rather than **compare**, is used when the key points of understanding several related things relate only to their differences.

Examples:

- contrast weak-form, semi-strong-form, and strong-form market efficiency
- contrast absolute and relative valuation models

Define

Definition: To state exactly the meaning of

Explanation: **Define** is used when it is important to know the exact meaning of a market or technical term. Learning outcomes with **define** are often building blocks to more advanced knowledge or skills.

Examples:

- define primary and secondary markets
- define forward contracts, futures contracts, options (calls and puts), swaps, and credit derivatives

Demonstrate

Explanation: **Demonstrate** asks you to show that you accomplish something using some stated means. In the first example, the skill is applying the Code of Ethics and Standards of Professional Conduct to workplace situations. In the second example, the skill is modifying a portfolio's risk and return and "how ..." narrows the focus to using interest rate swaps, forwards, and futures, as the means of modification. Where calculations are relevant and covered in the text, "**demonstrate** how..." subsumes the ability to make those calculations.

Examples:

- demonstrate the application of the Code of Ethics and Standards of Professional Conduct to situations involving issues of professional integrity
- demonstrate how interest rate swaps, forwards, and futures can be used to modify a portfolio's risk and return

Practice notes for staff and authors: **Demonstrate** can be used to ask candidates to show in action almost any skill. "**Demonstrate** how..." is a useful construction for competency-oriented LOS. **Demonstrate** has a high location in the RBT.

Describe

Definition: to state characteristic features of something, to portray it in words.

Explanation: **Describe**, **explain**, and **discuss** constitute a sequence of command words associated with increasingly greater expectations about the depth of your knowledge of a topic. "**Describe** how ..." means "provide an account of the ways ..."

Examples:

- describe sum-of-the-parts valuation and conglomerate discounts
- describe the effect on a portfolio's risk of investing in assets that are less than perfectly correlated
- describe how commodity swaps are used to obtain or modify exposure to commodities

Determine

Definition: to decide on through analysis of alternatives, to find or ascertain definitely

Explanation: In the first example, **determine** asks you process facts about alternative ways to address a problem and choose the best alternative. In the second example, **determine** asks you to find a breakeven point, and the associated content shows a graphical method (so **calculate** is not used). "**Determine** whether ..." addresses the ability to come to a "yes" or "no" conclusion.

Examples:

- determine an appropriate time-series model to analyze a given investment problem and justify that choice.
- determine breakeven and shutdown points of production
- determine whether the hypothesis is rejected at a given level of significance

Practice notes for staff and authors: **Determine** asks for a clear and exact decision or finding. **Determine** will substitute for **state** and **select** in approximately nine learning outcomes in which those command word figure.

Discuss	<i>Definition:</i> to examine critically from various points of view, considering pros and cons and relevant details. <i>Explanation:</i> Discuss indicates an nuanced, integrative knowledge of the subject of the learning outcome. Discuss subsumes the abilities to make evaluations or to do calculations related to the subject. Discuss is reserved for use at Level III of the CFA Program curriculum. <i>Examples:</i> ▪ discuss the principles of retirement planning ▪ discuss ethical and compliance considerations in advising private clients ▪ discuss the relationships among human capital, financial capital, and economic net worth
Estimate	<i>Definition:</i> To determine an approximate value for something; to reach an informed but possibly imprecise evaluation of something <i>Explanation:</i> This is the command word that available for finding an estimate of a quantity whose exact value is unknowable. <i>Examples:</i> ▪ Estimate a company's intrinsic value based on discounted cash flow analysis ▪ Estimate the impact of a change in accounting principle on a company's reported financial statement. ▪ estimate and interpret VaR under the parametric, historical simulation, and Monte Carlo simulation methods
Evaluate	<i>Definition:</i> To reach a conclusion about something by application of knowledge and judgment <i>Explanation:</i> Evaluations are conclusions based on skillfully processing facts and applying judgment where needed. <i>Examples:</i> ▪ evaluate the credit quality of a corporate bond issuer and a bond of that issuer ▪ evaluate the fit of a machine learning algorithm.
Explain	<i>Definition:</i> to make clear and intelligible, provide insight into <i>Explanation:</i> Explain incorporates the expectation that you can clarify meaning and relationships. Explain subsumes the ability to describe. [Where calculations are relevant to understanding and covered in the text, explain subsumes the ability to calculate.] "Explain how ..." means "provide insight into the ways ..." <i>Examples:</i> ▪ explain professionalism in investment management ▪ explain international parity conditions ▪ explain how flows in the balance of payment accounts affect currency exchange rates
Formulate	<i>Definition:</i> to express in a precise form; to devise <i>Explanation:</i> In the first sense, formulate asks you to state something —for example, a hypothesis test — where precision is important. In the second sense of "devise," formulate asks you to develop or create something —for example, a strategy — suitable to fulfilling some purpose. <i>Examples:</i> ▪ formulate a test of the hypothesis that the population correlation coefficient equals zero ▪ formulate a portfolio positioning strategy given forward interest rates and an interest rate view

Identify

Definition: To recognize, to correctly pick out or name

Explanation: **Identify** ask you to pinpoint what something is. In the first example, the learning outcome stops with identification. The second example asks you first to recognize when an arbitrage opportunity is present and then further asks you to calculate profit.

Examples:

- identify tax considerations affecting a private client's investments
- identify a triangular arbitrage opportunity and calculate its profit, given the bid-offer quotations for three currencies

Interpret

Definition: To explain the meaning or implications of something, to reach a conclusion about something by application of knowledge

Explanation: In the phrase “**calculate** and **interpret**,” **interpret** asks you to communicate an understanding of what you have calculated. The understanding extends to not only the result but any underlying formula. In the second example, you are asked to explain the implications of a feature of the yield curve. In the third example, the ask is to reach conclusions from the results of a performance attribution. Note that the LOS is not asking you to perform the attribution, but to interpret its results.

Examples:

- calculate and interpret measures of central tendency
- interpret the shape of the yield curve as an economic predictor
- interpret the sources of portfolio returns using a specified attribution approach

Justify

Definition: To provide good reasons for, to show to be valid or appropriate

Explanation: **Justify** asks you to defend some practice or decision with good reasons why it appropriate or correct. In “**recommend** and **justify**” your tasks are, first, to make a recommendation and, second, provide good reasons why the recommendation is appropriate.

Examples:

- justify the use of net asset value per share (NAVPS) in REIT valuation
- recommend and justify portfolio allocations and investments for a private client;
- recommend and justify a plan to manage risks to an individual's retirement lifestyle goals.

Recommend

Definition: To advise as suitable or fit for purpose

Explanation: Often found in recommend and justify

Examples:

- recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.
- recommend and justify an asset allocation using mean-variance optimization