

The prompts below are intended to help you prepare for the AP Exam and the in-class exam portion of your Create Task. Refer to the Personal Project Reference you submitted to College Board to answer the following.

Practice Free Response 1

Refer to the program code you submitted.

Describe one piece of documentation that would be appropriate to include with or in your program.

Describe the intended purpose of this documentation by identifying who would use it and what they would do with it.

(a) Consider the first iteration statement included in the Procedure section of your Personalized Project Reference. Describe the condition(s) that will cause the body of the iteration statement to execute at least once.

(b) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Write a call to your procedure with specific argument(s) that you could use for testing this procedure. Describe the program functionality that is related to this call.

(c) Consider the list identified in the List section of your Personalized Project Reference. Explain how you would need to adjust this part of your program if the list was not included in your code.

Practice Free Response 2

Refer to the program code you submitted.

Explain how you used or could have used feedback, testing, or reflection in the development of your program.

(a) Consider the first conditional statement included in the Procedure section of your Personalized Project Reference. Write an equivalent Boolean expression for this conditional statement.

(b) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Identify a strategy, other than using test cases, that you can use to test the correctness of your procedure. Describe how you would use this strategy.

(c) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Procedures are often used to organize larger problems into subproblems or smaller tasks. Identify the subproblem being solved or task that is being accomplished by your procedure. Explain how the procedure is used to accomplish the overall functionality of your program.

Practice Free Response 3

Refer to the program code you submitted.

Describe the problem that your program was created to address or the creative expression it pursues.

(a) Consider the code segment in part (ii) of the List section of your Personalized Project Reference that shows how your list is being used. Explain in detailed steps how this code segment works. Your explanation must be detailed enough for someone else to write the code segment.

(b) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Passing different values as arguments to a procedure can cause different segments of code to execute. Based on one of your arguments, describe where you could insert output statements in your procedure to test whether a block of code is executed or not. If it is not possible for different arguments to cause different segments of code to execute in your procedure, explain why not.

(c) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Explain how your program could be written differently if one of your parameters was removed from your procedure.

Practice Free Response 4

Refer to the program code you submitted.

Programs accept input to achieve their intended functionality. Describe at least one valid input to your program and what your program does with that input.

- (a) Consider the code segment in part(ii) of the List section of your Personalized Project Reference that shows how your list is being used. Describe a condition or error that would cause your iteration statement to not terminate and cause an infinite loop. If no such condition or error exists, explain how the loop could be modified to cause an infinite loop.

- (b) Consider the procedure identified in part(i) of the Procedure section of your Personalized Project Reference. Indicate two calls to your procedure with specific arguments. For each call explain how the arguments you pass cause a different segment of code to execute. If it is not possible for different arguments to cause different segments of code to execute or not execute in your procedure, explain why not.

- (c) Suppose you are provided with a procedure called `isEqual (value1, value2)`. The procedure returns true if the two parameters, value1 and value2 are equal in value and returns false otherwise. Using the list you identified in the List section of your Personal Project Reference, explain in detailed steps an algorithm that uses `isEqual` to count the number of times a certain value appears in your list. Your explanation must be detailed enough for someone else to write the program code.