AP Computer Science Principles
Create Performance Task
Scoring Commentaries on 2021 Rubrics
(Applied to Pilot Student Responses)

Sample F (Darts Game)
3/6 Points

Row 1: 1 pt
The response earned the point for this row, meeting all six of the criteria:
- The video demonstrates the running of the program, including game play input, such as entering the user's name, selecting a game, and clicking where darts are thrown; functionality of gameplay; and output of the score for each dart thrown, as well as a high score list. This satisfies the first three criteria for the video.
- The response describes the overall purpose of creating a program that "entertains children by giving them multiple different games to play."
- The response describes the functionality demonstrated as, "The video shows the user typing in their username, throwing the dart, getting their score, and then their high score being displayed."
- The response describes the input and output shown in the video as, "One input into the program is the user's name," and, "The user's name is turned into an output when it is displayed in the high scores list."

Row 2: 1 pt
The response earned the point for this row, meeting all three of the criteria:
- The first two code segments presented are used to compute the score. The response includes program code segments showing how data have been stored in the list `Scores`, as well as how another list, `HighScores`, uses and sorts `Scores` to identify the highest-scoring player.
- The name of the list used in the response is `Scores`.
- The response explains that `Scores` is "a list to show our high scores called 'scores,'" as well as "data in the scores list is an integer [sic]."

Row 3: 0 pts
The response did not earn the point for this row. The response does not meet either of the two criteria:
- The code segment demonstrates the use of list `Scores`; however, the use of the list does not manage complexity in the program. If the length of the list grows beyond 5, significant modifications would need to be made for the functionality to be maintained.
- The response states that the list "reduces the amount of lines because it makes it so we don't have to display the scores over and over again each time the game is played." However, it does not explain how the list `Scores` manage complexity by explaining how the program would be written different without using the list. Additionally, the response does not explain precisely how the program would be more complex if a list was not used to maintain high scores. In fact, in the program code given, use of individual variables instead of a list would lead to essentially the same program.

Row 4: 0 pts
The response did not earn the point for this row. The response met only one of the two criteria:
- The response does not include a student-developed procedure that uses at least one parameter. The procedure `backdrop switches` is a built-in event. Additionally, there is no code segment included showing a call to `backdrop switches`.
- The response does describe what the event does: it "throws a dart at the dart board at a random strength/height drop. Then, the algorithm scores the dart bases [sic] on what color the tip of the dart is touching."

Row 5: 1 pt
The response earned the point for this row, meeting both of the criteria:
- The response includes a program code segment of a student-developed algorithm that includes sequencing, selection (if...then), and iteration (forever loop). Because the forever loop is used purposefully to record where the dart is touching, it can be used to satisfy this requirement.
- The response explains in detail how the algorithm works, including that it "throws a dart at the dart board at a random strength/height drop. Then, the algorithm scores the dart bases [sic] on what color the tip of the dart is touching. It does this by first, showing you how many darts you have left. Then, it only lets you throw the dart if there are 3 darts left because it is the first dart. When the mouse is clicked, the dart goes to where the pointer is and then its y value is changed randomly. One is taken away from darts left and then the program runs a loop that assigns the dart different scores based on which color the tip of the dart is touching."

Row 6: 0 pts
The response did not earn the point for this row. The response does not meet any of the three criteria:
- The response does not describe two calls to the `backdrop switches` procedure using different arguments. Instead, the response describes two paths in the program code based on user input during execution of the code rather than two calls to the procedure from another part of the program code that lead to different behaviors.