Student	Steve Protheroe-Hewitt	55

Part 1

	Available	Marks
Q1: Calculate the first 200 Pell numbers and place them in a dataframe `pelldata` that has three columns. The first column should contain the index *n*, the second column should contain the Fibonacci number F_n, and the third column should contain the Pell number P_n. Give the three columns appropriate column names for ease of use in later tasks.	20	11
Q2: Calculate this approximation for its first 200 terms and add this as a fourth column in the `pelldata` dataframe. Give the column a suitable column name.	10	3
Q3: For each value of *n* calculate the difference between the approximation to $\sqrt{2}$ and the value for $\sqrt{2}$ as calculated using R's `sqrt()` function .Add this as a column to the `pelldata` dataframe that shows the difference to five decimal places. Give the column a suitable column name.	10	5
Q4: For each value of *n* calculate the accuracy of the approximation as the number of decimal places to which the approximation is correct. Add this as a column to the `pelldata` dataframe and give it a suitable column name.	15	8
Commenting and use of white space	5	4
	TOTAL	31

Comments

Remember to put your name and student number in a comment at the top of the script.
Commenting is good otherwise.
Q1: Not the most elegant solution but it works.
Q2: Pell approximation is incorrect – it should tend towards 1.414… rather than continue increasing.
Q3: Difference works on incorrect data but is fundamentally okay.
Q4: Accuracy is incorrect because it works on incorrect data but the idea behind it is fundamentally okay.

Part 2

	Available	Marks
Explain how your code works for each question (including flow charts) and explain how you tested your code (include examples of the code and data used).	30	18
A reflection on what you found challenging, what you learned, and what you would do differently next time.	10	6
	TOTAL	24

Comments
You don't need the introduction to be quite as long. The second paragraph on its own would be fine. Be careful with your diagrams – always make sure that the text is easily readable if viewed at 100% in MS Word. Good use of code snippets. You have done a decent job of documenting the code you wrote. Good and appropriate use of ChatGPT.