

Student	Osvaldis Staneldis	44
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Part 1

	Available	Marks
Q1: Calculate the first 200 Pell numbers and place them in a dataframe <code>pelldata</code> 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	10
Q2: Calculate this approximation for its first 200 terms and add this as a fourth column in the <code>pelldata</code> 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 <code>sqrt()</code> function. Add this as a column to the <code>pelldata</code> 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 <code>pelldata</code> dataframe and give it a suitable column name.	15	7
Commenting and use of white space	5	2
	TOTAL	27
Comments Remember to put your name and student number in a comment at the top of the script., not the bottom. You need to include far more comments. Also include comments to show which parts of the code correspond to which questions. Q1: You were specifically told not to write functions to do this. Q2: Although you've created an approximate column for the approximation the calculated value is incorrect. Q3: good Q4: Does not run, but the logic is 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	12
A reflection on what you found challenging, what you learned, and what you would do differently next time.	10	5
	TOTAL	17
Comments This should be structured so that you have a flow chart and discussion of the code for each question, not a single flow chart and then a general description. The flow charts should show all appropriate loops and decision points. The reflection would be better as prose rather than what are effectively bullet points.		