

MTH 337 Intro to Scientific computing

SAMPLE QUIZ #5

Fall 2020

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The Sample Quiz is for you to practice for the quiz that will be at the end of class on Monday on Gradescope.

- (1) Write the code to generate the list of the halves of the first 100 integers. Use list comprehension
- (2) Suppose the list `plist` contains the first 500 prime numbers. Using list comprehension produce the list `loglist` of the logarithm of the numbers in `plist`
- (3) Suppose the list `plist` contains the first 500 prime numbers. Using list comprehension produce the list `mylist` of the numbers in `plist` smaller than 300 that are odd
- (4) Write code that creates a plot of the function

$$f(x) = x^2 + 1 \text{ for } 0 \leq x \leq 1$$

Use at least 100 points

- (5) Write code that creates a plot of the function

$$f(x) = 2^x \text{ for } 1 \leq x \leq 2$$

Use at least 100 points

- (6) Define a function that can be called with one or two arguments. If called with two arguments it returns the difference of the first minus the second one. If called with one argument it returns the argument itself