

MTH 337 Intro to Scientific computing

SAMPLE QUIZ #7

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.

For the remainder of this quiz assume that the following code has been executed:

```
import matplotlib.pyplot as plt
import numpy as np
```

(1) Write the code that creates a numpy array `pippo` containing all the integers from 1 to 30

(2) Write the code to reshape `pippo` to shape 3×10

(3) Given

```
col_ar=np.random.rand(4,4,3)
```

and `col_ar` is a multidimensional array representing the RGB colors of a 4×4 image. Write a statement that will make the image have only red scale colors (no green and blue components)

(4) Write code that creates a 2×2 green square in the bottom right corner of the image and displays the image

(5) Generate a random two dimensional array 40×22 of values in $[0,1]$ and plot it as an image, using the **viridis** colormap.