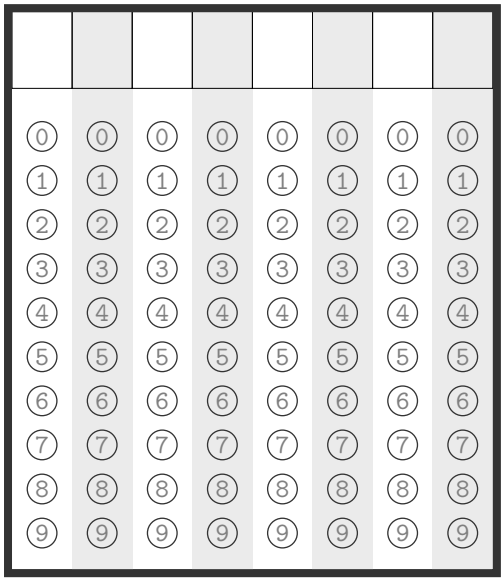
MTH 337 B
QUIZ 5 SAMPLE

Name:

UB Person Number:



Instructions:

- If the first column of the quiz contains Python code, in the second column write the output that this code produces when executed.
- If the second column contains a description of some Python operation, in the first column write the code that will perform this operation.
- Treat the first column as a sequence of Jupyter Notebook code cells that are executed from top to bottom. This means e.g. that you import some module in one cell, then you don't need to import it again in the following cells. If you define some variable or function in one cell, then you can use it in the following cells.

	Python Code	Result	

1.	`import numpy as np`
	`a = np.arange(30).reshape(5, 6)`
	`b = a[1:4, 2:]`
	`print(b.shape)`		

2.	`c = np.arange(8).reshape(2, 4)` `print(c%3 == 0)`		

3.	`c = np.arange(8).reshape(2, 4)`
	`d = (c%3 == 0)`
	`print(c[d])`		

4.	`c = np.arange(8).reshape(2, 4)`
	`e = (c%3 == 0) | (c%5 == 0)`
	`c[e] = 9`
	`print(c)`		

5.	`f = np.arange(4).reshape(2, 2)`
	`g = np.ones((2, 2), dtype=int)`
	`f[f <= g] = 9`
	`print(f)`		

6.		For the remainder of this quiz assume that the following code has been executed: `import numpy as np` Write a function `nrows(arr)` that takes as its argument a 2-dimensional numpy array `arr` and returns the number of rows of `arr`.	
7.		Write a function `f(arr)` that takes as its argument a numpy array `arr` and returns the mean of all entries of `arr` that are **not** equal to 10.	