The Exam Data

What is the result in degrees for the following mathematical expression?

$asec(log_6^2(e^3))$

- 76.5630
- 1.2675
- 0.9307
- 69.1016
- 72.6249
- 1.2061
- 1.3363
- 53.3266

myPrimes is a matrix that contains random integer numbers under 100. Which of the following commands looks for the prime numbers in the matrix and replaces them with the next prime of their index?

- (●) myPrimes(find(isprime(myPrimes))) = nextprime(myPrimes(find(isprime(myPrimes))))
- ( ) myPrimes(find(isprime(myPrimes))) = nextprime(find(isprime(myPrimes)))
- ( ) None of the other options
- ( ) myPrimes(isprime(myPrimes)) = nextprime(isprime(myPrimes))

Clear my choice

How many numbers in the complex array **m3** have their imaginary part less than the square root of their real part?

- 246052
- 117352
- 153424
- 132403
- None of the other options
- 153374

A function accepts an array **data** and performs function argument validation, **data** must be real integers less than or equal to zero, check all that applies in writing the function argument definition clause:

- [ ] `mustBeNonnegative`
- [ ] `mustBeNonzero`
- [x] data (:, :)
- [x] `mustBeReal`
- [ ] `mustBeGreaterThan(data, 100)`
- [ ] `mustBeFloat`
- [ ] string
- [ ] `mustBeNegative`
- [ ] double
- [ ] `mustBePositive`
- [ ] `mustBeLessThanOrEqual(data, 100)`
- [ ] char
- [ ] `mustBeFinite`
- [ ] `mustBeLessThan(data, 100)`
- [ ] `mustBeGreaterThanOrEqual(data, 100)`
- [x] `mustBeInteger`
- [ ] `mustBeNonNan`
- [ ] data (1, 1)
- [ ] data (1, :)

The sum of all elements in the 350th column of matrix **m5** is 4403

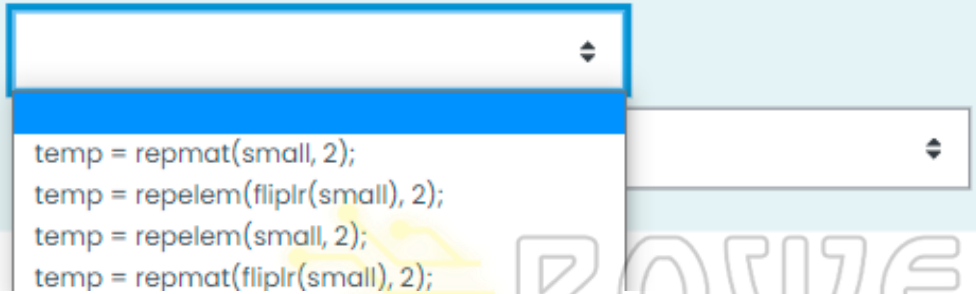
If we flip **m5** vertically and raise each element to 3.5, then sum the elements of the main diagonal, the total is

Starting from the matrix ***small*** shown in the figure below, what set of MATLAB commands are needed to generate the matrix ***large***?

$$small = \begin{bmatrix} 1 & 2 & 3 & 4 \end{bmatrix}$$

$$large = \begin{bmatrix} 4 & 4 & 3 & 3 & 2 & 2 & 1 & 1 & 4 & 4 & 3 & 3 & 2 & 2 & 1 & 1 \\ 4 & 4 & 3 & 3 & 2 & 2 & 1 & 1 & 4 & 4 & 3 & 3 & 2 & 2 & 1 & 1 \end{bmatrix}$$

small = [1,2,3, 4];



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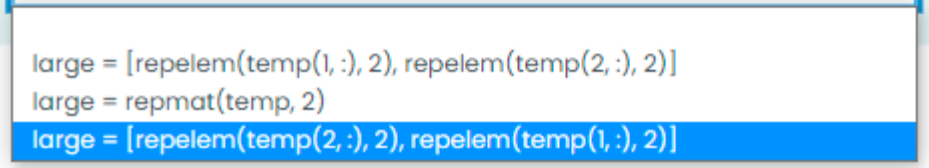
small = [1,2,3, 4];

temp = repmat(fliplr(small), 2);

large = [repelem(temp(2, :), 2), repelem(temp(1, :), 2)]



Use MATLAB's import wizard to read the content of the file **data1.txt** as a string array. Then, write a MATLAB script that counts the number of occurrences of the substring **"an"**, and deletes all numbers between the square brackets.

You are required to write the code that plots the function **sin(x) + cos(3x)** and the function **sin(8x)** over the range -4pi to 4pi with a fixed spacing of 0.05 according to the following specifications:

- The first plot must be in green and dashed, the second in solid red.
- Both plots must show up simultaneously
- The title must be called "Waves", in size 18 and in red.
- The axes labels must be "time" and "value" in blue.
- You must show the grid

You are required to write a MATLAB function that accepts the array variable **source1** and returns the array variable **target1.** The function must check if the array has an even number of columns, otherwise, it exits. The function processes two columns at a time (*i.e.;* columns 1 and 2, then 3 and 4, and so on). It combines the two columns into one column of complex numbers where the data in the first column represents the real part, and the data in the second column represent the complex part. The variable **target1** has all the newly generated complex columns.