[ARTEM DUDKO] - [HW #2] - [2/3/2020]

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[PROBLEM #15]

```
format compact, clear, clc, close all

% one row of five zeros and four 8.1 values
q = [ zeros(1,5),8.1*ones(1,4)]
```

```
q =
  Columns 1 through 7
         0         0         0         0         0    8.1000    8.1000
  Columns 8 through 9
    8.1000    8.1000
```

[PROBLEM #21]

```
format compact, clear, clc, close all

vC = 2:3:38

% index of all the even coloumns
vCeven = vC([1],[2:2:12])
% index of all the odd coloumns
vCodd = vC([1],[1:2:13])
```

```
vC =
     2     5     8    11    14    17    20    23    26    29    32
 35    38
vCeven =
     5    11    17    23    29    35
vCodd =
     2     8    14    20    26    32    38
```

[PROBLEM #38]

```
format compact, clear, clc, close all

N = reshape(0:3:51,6,3)'

% copy and paste the row elements
```

```
Ua = [N(1,1:3) N(3,4:6)]
% copy and paste the coloumn elements
Ub = [N(:,1);N(:,3);N(:,6)]
% transpose the row elements to fit the coloumn, and add column
 elements
Uc = [N(2,2:5)';N(2:3,5)]
```

```
N =
     0     3     6     9    12    15
    18    21    24    27    30    33
    36    39    42    45    48    51
Ua =
     0     3     6    45    48    51
Ub =
     0
    18
    36
     6
    24
    42
    15
    33
    51
Uc =
    21
    24
    27
    30
    30
    48
```

[PROBLEM #44]

```
format compact, clear, clc, close all

% two squares of I matrices
a = [eye(3) eye(3)]
% a rectangle of zeros and a rectangle of ones
b = [zeros(2,3) ones(2,2)]
% a bit of a mess to comply with syntax and problem directions.
% several ones and zeros commands to construct the matrix without
 syntax
% errors
c = [ones(1,1) zeros(1,2) ones(1,1); ones(2,1) zeros(2,3)]
```

```
a =
     1     0     0     1     0     0
     0     1     0     0     1     0
     0     0     1     0     0     1
b =
     0     0     0     1     1
     0     0     0     1     1
c =
     1     0     0     1
```

```
     1     0     0     0
     1     0     0     0
```

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