

# HW4

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For question 1,2,3, please see the 'm' file named 'hw\_1\_2\_3.m' in which i write a function to compute A\_inverse, A\_inverse\_decom(eigendecomposition method) and A\_half(via eigendecomposition method).

## Question 4

It is in the file of 'hw4-4.m'.

## Question 5

```
my_quant_price_sugar(5,25)
```

```
final_price = 125
```

```
my_quant_price_sugar(10,25)
```

```
final_price = 200
```

```
my_quant_price_sugar(100,25)
```

```
final_price = 1875
```

```
k1=[[5,1],[25,10]];
my_quant_price_sugar_2prods(k1)
```

```
final_price = 237.1500
ans = 237.1500
```

```
k2=[[10,9],[25,10]];
my_quant_price_sugar_2prods(k2)
```

```
final_price = 316.2000
ans = 316.2000
```

```
k3=[[20,20],[25,10]];
my_quant_price_sugar_2prods(k3)
```

```
final_price = 604.5000
ans = 604.5000
```

## Question 6

Test some matrix

```
A=[2 3 4;7 8 9;15 31 17];
ex_transpose(A) %check whether our matrix transpose is equal to matlab methods. 1 for
```

```
m = 3
```

```
n = 3
A_trans = 3x3
    2     7    15
    3     8    31
    4     9    17
ans = logical
    1
ans = 3x3
    2     7    15
    3     8    31
    4     9    17
```

## Question 7

See the matlab file 'ols.m'.