Problem 1

```
>> mat1=randi([-20, 20], 5, 6)

mat1 =

   13  -17  -14  -15    6   11
   17   -9   19   -3  -19   10
  -15    2   19   17   14   -4
   17   19   -1   12   18    6
    5   19   12   19    7  -13

>> sum(mat1<0)

ans =

    1    2    2    2    1    2

>> sum(sum(mat1<0))

ans =

   10
```

Problem 2

```
>> Data = [33  10.5  40  18  20  7.5]

Data =

  33.0000   10.5000   40.0000   18.0000   20.0000    7.5000

>> Hours = Data(1:2:(length(Data) - 1))

Hours =

   33    40    20

>> Hourly_Wages = Data(2:2:length(Data))

Hourly_Wages =
```

```
   10.5000   18.0000    7.5000
```

```
>> Gross_Pay = Hours .*Hourly_Wages
```

```
Gross_Pay =

  346.5000  720.0000  150.0000
```

Problem 3

```
>> r=[5.497  5.495  5.500  5.500  5.502  5.506  5.500  5.492]

r =

   5.4970   5.4950   5.5000   5.5000   5.5020   5.5060   5.5000   5.4920

>> h=[11.10  11.12  11.09  11.11  11.11  11.10  11.08  11.11]

h =

  11.1000  11.1200  11.0900  11.1100  11.1100  11.1000  11.0800  11.1100

>> vol=pi.*r.^2.*h

vol =

  1.0e+03 *

   1.0537   1.0548   1.0539   1.0558   1.0566   1.0572   1.0530   1.0527
```

Problem 4

```
>> r=-8+(7-(-8))*rand(1,4)

r =

   2.1955   1.8265  -5.5608  -6.2150
```

```
>> c=-8+(7-(-8))*rand(4,1)

c =

   -0.5245
    6.3962
   -2.8942
    0.7790

>> r*c

ans =

   21.7833

>> c*r

ans =

   -1.1516   -0.9581    2.9169    3.2600
   14.0430   11.6824  -35.5679  -39.7524
   -6.3544   -5.2862   16.0942   17.9876
    1.7104    1.4228   -4.3320   -4.8416
```

Problem 5

```
>> rainmat=[randi([50, 60], 1, 4); randi([40, 70], 1, 4); randi([30, 80], 1, 4)]

rainmat =

    54    51    60    50
    64    65    66    42
    50    43    70    52
>> [i, j]=find(summat==max(summat))

i =

     2


j =
```

```
    1
```

Problem 6

```
>> n=[2 -9 10];
>> d=[2 1];
>> [q, r]=deconv(n, d)

q =

    1   -5


r =

    0    0   15
>> poly2sym(q)

ans =

x - 5

>> poly2sym(r)

ans =

15
```