Table of Contents

Question 1

```
a=[2.3 5.8 9];
disp(a);
b=sin(a);
disp(b);
a1=a+3;
disp(a1);
b=[5.2 3.14 2];
disp(b);
c=a+b;
disp(c);
a2=a.^2;
disp(a2);
c1=0:10;
disp(c1);
c2=0:2:10;
disp(c2);
ans1=linspace(10,20,6);
disp(ans1);
ans2=logspace(10,100,5);
disp(ans2);
clearvars a b a1 c a2 c1 c2 ans1 ans2;
```

```
    2.3000    5.8000    9.0000


    0.7457   -0.4646    0.4121


    5.3000    8.8000   12.0000


    5.2000    3.1400    2.0000


    7.5000    8.9400   11.0000


    5.2900   33.6400   81.0000


     0     1     2     3     4     5     6     7     8     9    10
```

```
    0     2     4     6     8    10

   10    12    14    16    18    20

  1.0e+100 *

   0.0000    0.0000     0.0000     0.0000     1.0000
```

Question 2

```
z1=15*((sqrt(10)+(3.7)^2)/log10(1365)+1.9);
disp(z1);
z2=(((2.5)^3*(16+(216/22)))/(1.7)^4+14)+nthroot(2050,4);
disp(z2);
clearvars z1 z2;
```

```
  109.1295

   69.0291
```

Question 3

```
fun = @(x) 2.*x.^4-6.*x.^3+14.8.*x.^2+9.1;
fun1 = @(x) exp(2.*x)/sqrt(14+x.^2+x);
disp(fun(2.34));
disp(fun1(2.34));
```

```
   73.2258

   23.0736
```

Question 4

```
fun2 = @(a,x) x/2-sin(2*a*x)./4*a;
disp(fun2(0.5,pi*3/5)-fun2(0.5,pi/9));
```

```
    0.6918
```

Question 5

```
A=2;
B=23;
C=13;
D=-24;
X0=8;
Y0=3;
Z0=-10;
dis=abs(A*X0+B*Y0+C*Z0+D)/sqrt(A.^2+B.^2+C.^2);
```

```
disp(dis);
clearvars A B C D X0 Y0 Z0;

    2.6042
```

Question 6

```
clearvars a;
a(9)=7.5;
disp(a);

  Columns 1 through 7

        0         0         0         0         0         0         0

  Columns 8 through 9

        0    7.5000
```

Question 7

```
B=[18 17 16 15 14 13 ; 12 11 10 9 8 7 ; 6 5 4 3 2 1];
va=[B(:,2),B(:,5)];
disp(va);
vb=[B(3,3:6),B(:,2)'];
disp(vb);
vc=[B(:,2),B(:,4),B(:,6)];
disp(vc);

    17    14
    11     8
     5     2


     4     3     2     1    17    11     5

    17    15    13
    11     9     7
     5     3     1
```

Question 8

```
A=[3 2 5;4.5 2 3;5 1 2.5];
C=[7.5;5.5;4.5];
AN1=inv(A);
AN2=AN1*C;
disp(AN2);

    0.2143
    0.5268
```

```
    1.1607
```

Question 9

```
fun3 = @(x)1.5.*sin(5.*x);
fun4 = @(x)1.5.*cos(3.*x);
fplot(fun3,[0 1 2]*pi);
hold on;
fplot(fun4,[0 1 2]*pi);
xlim([-2,2]);
```

Question 11

```
A=[2 6 5 2;8 3 1 5;3 5 3 6;5 9 7 1;8 7 2 4];
i=find(A<7);
disp(i);
[i,j]=find(A<7);
disp(i);
disp(j);
[j,k]=find(A>2 & A<5);
disp(j);
disp(k);
q=A(j);
q1=A(k);
disp(q);
disp(q1);
disp(length(find(A>2 & A<5)'));
```

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