Q1: A) x=[1 2 3; 4 5 6]' {1 4 / 2 5 / 3 6}

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B) S1=@sin; S2=S1(pi/6) {0.5000}

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3) x=7/2*j {0+3.5000i}

4) The code we use to calculat the division of x^3+4x^2+2x+7 by $5x^2-2x+1$ is:-

```
A=[1 4 2 34];
B=[5,-2,1];
[m,n]=deconv(A,B)
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5) A=-5+3i; Abs(A); {>> / new prompt}

6) X=linspace(5,8,7) {5.0 5.5 6.0 6.5 ... 8.0}

7) A=[-7 14 36 5; 16 22 8 9; 2 19 25 3];
X=size(A) {3 4}

8) X=fzero('x.^2-4',[0,3]) {2}

9) L=[2 1; 3,5]; H=[60; 2 4];
X=L*H,

10) L=[2 1; 3,5]; H=[6 0; 2 4];
X=L.*H

11) X=fminbnd('cosd',[0,pi]) {3.1416}

12) A = [3, -2, 2, 1, 0] % the coefficients of a polynomial.

To find the values of (X) :- roots(A)
(Solve)

13) X = 5 : -1 : 1.5 {5 4 3 2}

14) X = 1 : 2 : 7;
X' {1 3 5 7}

15) X = 4^2 - 12 - 8/4 * 2 {0}

16) U = 0 : 0.1 : 10;
X = length (U) {101}

17) A = [2 -4 10 13; 16 3 -7 18; 8 4 9 -25];
X = A(2:3, 1:3)

18) To import the Microsoft Excel workbook file (Exam.xls) into matlab. {X = xlsread ('Exam')}

19) a = [1, 2, 3]; b = [4; 5; 6];
X = [a; b] {1 2 3 / 4 5 6}

Write a code to calculate the value for the tenth term of the following series:-
(n = 10)

$$R = \sum_{j=1}^{n} 14j^3 - 20j^2 + 34 + j, \quad j = 1, 2, 3, \ldots$$

Q3: Write a code to plot the following function on the interval $(0 < x < 20)$ such that $(0 < x < 10)$ the line will be red and $(x > 10)$ the line will be blue dashed line.

$$f(x) = \begin{cases} x^2, & 0 < x < 10 \\ x, & x > 10 \end{cases}$$

A3:
```
» fplot('x.^2',[0,10],'r');
hold on
fplot('x',[10,20],'--b*');
axis([0,20,0,100]);
xlabel('x'); ylabel('Y'); title('Exam');
```