
`%Homework 4/19`

`%Problem 1`

`%Functions given in problem`

`ex1=sym('x^2-1');`

`EX1=sym('X^2 - 1');`

`eq1=sym('x^2=1');`

`EQ1=sym('X^2 = 1');`

`%Substitute 4 for each equation`

`ex1sub4=subs(ex1,'x',4)`

`subs(EX1,'X',4); %Result is 15, since it is 4^2-1= 16-1=15`

`eq1sub4=subs(eq1,'x',4)`

`subs(EQ1,'X',4); %Result shows 16==1`

`%Problem 2`

`%Define vector of even numbers from 0 to 10`

`v=[0:2:10];`

`ex1subv=subs(ex1,'x',v)`

`subs(EX1,'X',v);`

`eq1subv=subs(eq1,'x',v)`

`subs(EQ1,'X',v);`

`%This works for all four version of the expressions`

`%Problem 3`

`%Expressions/Equations given`

`ex4=sym('a*x^2 +b*x+c');`

`EX4=sym('A*X^2 +B*X +C');`

`eq4=sym('a*x^2 +b*x+c=0');`

`EQ4=sym('A*X^2 +B*X +C=0');`

`%Substituting values`

`ex4sub=subs(ex4,{'a','b','c','x'}, {3,4,5,(1:0.5:5)})`

`subs(EX4,{'A','B','C','X'}, {3,4,5,(1:0.5:5)});`

`eq4sub=subs(eq4,{'a','b','c','x'}, {3,4,5,(1:0.5:5)})`

`subs(EQ4,{'A','B','C','X'}, {3,4,5,(1:0.5:5)});`

`%Results are symbolic`

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ex1sub4 =

15

eq1sub4 =

16 == 1

ex1subv =

[-1, 3, 15, 35, 63, 99]

eq1subv =

[0 == 1, 4 == 1, 16 == 1, 36 == 1, 64 == 1, 100 == 1]

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