function out = Basis\_Func\_84(x)  
x1 = x(1,:);  
x2 = x(2,:);  
x3 = x(3,:);  
x4 = x(4,:);  
x5 = x(5,:);  
x6 = x(6,:);  
  
out = [  
 [ones(1,length(x(1,:)))];  
 x1  
 x2  
 x3  
 x4  
 x5  
 x6  
 x1.\*x2  
 x1.\*x3  
 x1.\*x4  
 x2.\*x3  
 x1.\*x5  
 x2.\*x4  
 x1.\*x6  
 x2.\*x5  
 x3.\*x4  
 x2.\*x6  
 x3.\*x5  
 x3.\*x6  
 x4.\*x5  
 x4.\*x6  
 x5.\*x6  
 x1.\*x2.^2  
 x1.^2.\*x2  
 x1.\*x3.^2  
 x1.^2.\*x3  
 x1.\*x4.^2  
 x2.\*x3.^2  
 x1.^2.\*x4  
 x2.^2.\*x3  
 x1.\*x5.^2  
 x2.\*x4.^2  
 x1.^2.\*x5  
 x2.^2.\*x4  
 x1.\*x6.^2  
 x2.\*x5.^2  
 x3.\*x4.^2  
 x1.^2.\*x6  
 x2.^2.\*x5  
 x3.^2.\*x4  
 x2.\*x6.^2  
 x3.\*x5.^2  
 x2.^2.\*x6  
 x3.^2.\*x5  
 x3.\*x6.^2  
 x4.\*x5.^2  
 x3.^2.\*x6  
 x4.^2.\*x5  
 x4.\*x6.^2  
 x4.^2.\*x6  
 x5.\*x6.^2  
 x5.^2.\*x6  
 x1.^2  
 x1.^3  
 x2.^2  
 x2.^3  
 x3.^2  
 x3.^3  
 x4.^2  
 x4.^3  
 x5.^2  
 x5.^3  
 x6.^2  
 x6.^3  
 x1.\*x2.\*x3  
 x1.\*x2.\*x4  
 x1.\*x2.\*x5  
 x1.\*x3.\*x4  
 x1.\*x2.\*x6  
 x1.\*x3.\*x5  
 x2.\*x3.\*x4  
 x1.\*x3.\*x6  
 x1.\*x4.\*x5  
 x2.\*x3.\*x5  
 x1.\*x4.\*x6  
 x2.\*x3.\*x6  
 x2.\*x4.\*x5  
 x1.\*x5.\*x6  
 x2.\*x4.\*x6  
 x3.\*x4.\*x5  
 x2.\*x5.\*x6  
 x3.\*x4.\*x6  
 x3.\*x5.\*x6  
 x4.\*x5.\*x6  
 ];

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