
Chapter 3-HW Problems 25-26

Table of Contents

Problem 25	1
Problem 26	2

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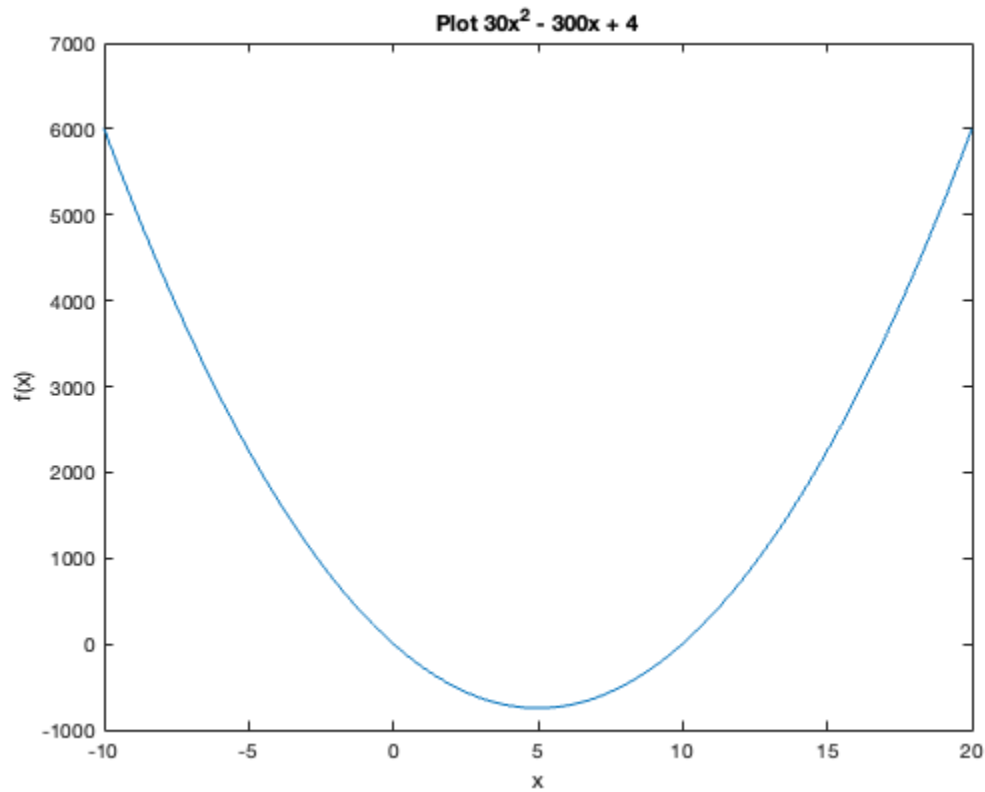
3 March 2024

Problem 25

```
f = @(x) 30*x.^2 - 300*x + 4;
```

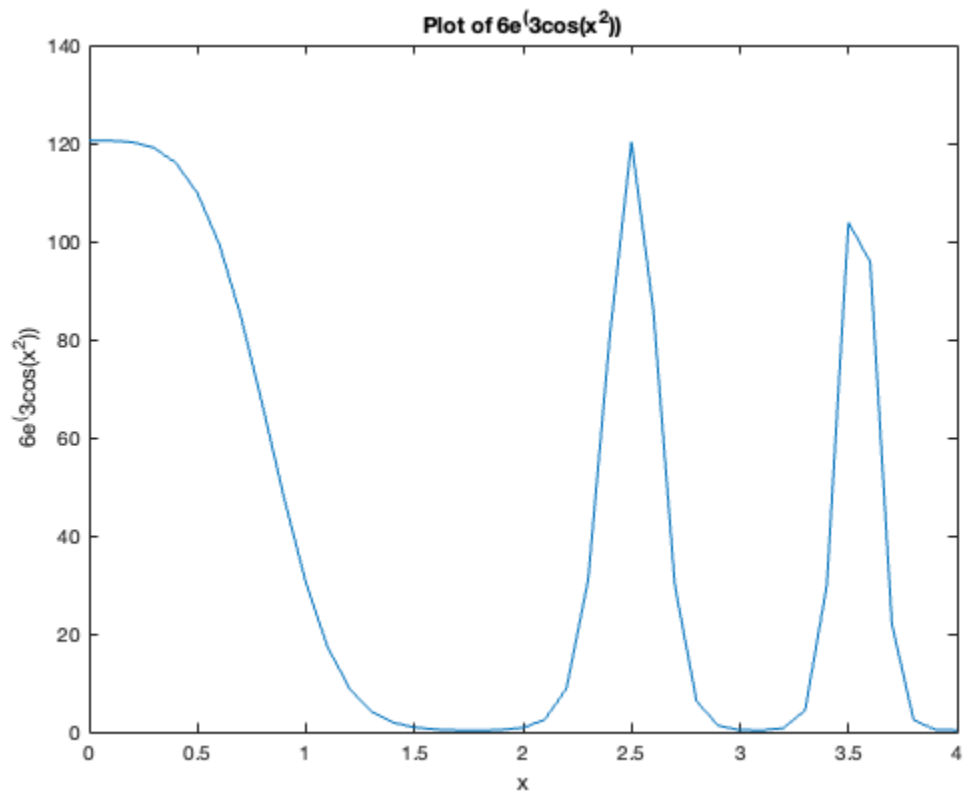
```
% a.  
x = linspace(-10, 20, 500);  
y = f(x);  
plot(x, y);  
xlabel('x');  
ylabel('f(x)');  
title('Plot 30x^2 - 300x + 4');  
% b.  
x_min = fminbnd(f, -10, 20);  
y_min = f(x_min);  
fprintf('The minimum of the function occurs at x = %f and y = %f\n', x_min,  
y_min);
```

The minimum of the function occurs at x = 5.000000 and y = -746.000000



Problem 26

```
h = @(z) 6*exp(z);  
g = @(y) 3*cos(y);  
f = @(x) x.^2;  
composed_function = @(x) h(g(f(x)));  
x_values = 0:0.1:4;  
y_values = composed_function(x_values);  
plot(x_values, y_values);  
xlabel('x');  
ylabel('6e^(3cos(x^2))');  
title('Plot of 6e^(3cos(x^2))');
```



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