| MATH 250 Exam #4 Fall 2006 | Show work whenever you can and check your results as time permits. | Name: |

MATH 250
Exam #4
Fall 2006

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Name:

Prob. Num.	Point Value	Points Given
1	25	
2	25	
3	25	
4	25	
Total	100	
Curve		
Grade		

1) Find a particular solution to $y'' + 4y = 8\sin 2t$.

2) Find a general solution to $y'' - 2y' - 3y = 3t^2 - 5$

3) Determine the form of a particular solution for $y'' - 4y' + 5y = e^{5t} + t\sin 3t - \cos 3t$, but do not solve.

4) A 0.25-kg mass is attached to a spring with stiffness 8 N/m. The damping constant for the system is 0.25 N-sec/m. If the mass is moved 1 m to the left of equilibrium and released, what is the maximum displacement to the right that it will attain?