**Sample 7**



**In the damped mass-spring system shown above, the masses m1, m2 and m3 are**

**.8, .6 and .5, the spring constants** **k1, k2, k3 and k4 are 4.3, 5.1, 4.6 and 5.4, the damping constants c1, c2, c3 and c4 are .24, .12, .20 and .16, and x1, x2 and x3 are the displacements of m1, m2 and m3 from their equilibrium positions.**

**Write a MATLAB program as follows:**

**1) t will go from 0 to 12 sec in steps of .001 sec.**

**2) For each of the 3 natural frequencies, plot x1, x2 and x3 versus t using**

**using the colors blue, red and green and the t axis in black (there will**

**be 3 figures). The figures should look like the ones on the attached**

**sheets.**

**Equations**

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