Name_____

Student I.D._____

Math 2250-4
Quiz 9
March 22, 2013

1a) Find a particular solution to the undamped forced oscillator differential equation for $x(t)$ given by

$$x''(t) + 4\,x(t) = 10\cos(3\,t).$$

(5 points)

1b) What is the general solution to the differential equation above?

(2 points)

2a) What form would the undetermined coefficients particular solution take, for the forced oscillator equation

$$x''(t) + 4\,x(t) = 10\cos(2\,t)\ ?$$

(You don't need to find the precise particular solution.)

(2 points)

2b) What is the name of the phenomenon that solutions to this differential equation will exhibit?

(1 point)