Differential Equations - Homework 2

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Homework 2 - Practice Problems

1. Imagine some hotshot mathematician comes up to you with a solution to a really impossible differential equation. You don't know how to solve the differential equation, but you don't believe that the answer is correct. How could you check (prove) whether or not the answer is correct?
2. **From the book:**
   Section 1.1: 1, 3, 19, 24, 27
   Section 1.2: 3, 5, 8, 25 (HINT use equations (9) - (11) in the chapter to develop the ODE.)
   Section 1.3: 21 (do this one by hand), 26 (you can use dfield for this problem)

Other Notes:

1. Remember to keep working on your foundational skills. If you want more integration or algebra practice come see me!
2. Make sure you are starting to remember things like $\frac{dy}{dx}$ tells me about slope of the function $y = f(x)$ and also relates to speed, or $\frac{d^2y}{dx^2}$ tells me about the curvature of the function $y = f(x)$ and also relates to acceleration.
3. You have lots of resources for learning Differential Equations: two text books, online class videos, class time, office hours, lecture notes, and other online resources are all available.