Solutions to Week in Review 6

1. $y = \sqrt[3]{3x^3 - \frac{1}{2}\sin 3x + \frac{3}{2}C}$

2. $y = -\sqrt{2\ln|x| + 2x + 14}$

3. $y = \tan(x - x^2)$

4. The salt water problems are usually easier to solve if you view the differential equation as a linear one as opposed to a separable one. Either technique will work, however.

5. $y = e^x + 3e^{-x}$

6. $y = x(\ln\frac{x^2}{64} + \frac{1}{4})$

7. $y = 2 + e^{-x^3}$

8. $y = \dfrac{e^{x^2} + 2C}{2x^2}$

9. $10 - 10e^{-0.6}$, or ≈ 4.512 kg of salt

10. $5e^{-0.04}$, or ≈ 4.8 kg of salt