

Solutions to Week in Review 5

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

2. $y = e^{\pm\sqrt{1/2x^2+2C}}$

3. $y = \ln\left(\frac{1}{3}e^{3x} + e^2 - \frac{1}{3}\right)$

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

5. $5e^{-0.4}$ kg of salt.

6. $y = \frac{1}{3}x - \frac{1}{9} + Ce^{-3x}$

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

8. $y = \frac{-1/2 \cos(x^2) + \pi - 1/2}{x^2}$

9. $y = 100 - 100e^{-.005t}$

10. $L = \frac{-2}{27} + \frac{13\sqrt{13}}{108}$

11. $L = \ln(\sqrt{2} + 1)$

12. 14