

Homework #6 Final Answers

Section 6.8

57. 1

59. $e^{-2} = \frac{1}{e^2}$

63. 1

Plus Q 1: e

Section 7.1

3. $\frac{1}{5} x \sin(5x) + \frac{1}{25} \cos(5x) + C$

12. $y \arctan(2y) - \frac{1}{4} \ln |1 + 4y^2| + C$

Can Drop 1.1 here

15. $x (\ln x)^2 - 2x \ln x + 2x + C$

30. $\frac{\sqrt{3}\pi}{6} - \frac{\pi}{4} + \frac{1}{2} \ln 2$

or $\frac{1}{2} \ln 2 = \ln(2^{1/2}) = \ln \sqrt{2}$

Plus Q 2: $\frac{x^2}{2} \arctan x - \frac{x}{2} + \frac{1}{2} \arctan x + C$

Plus Q 3: $x \ln(x^2+7) - 2x + \frac{14}{\sqrt{7}} \arctan\left(\frac{x}{\sqrt{7}}\right) + C$

or $\frac{14}{\sqrt{7}} = \frac{2 \cdot 7}{\sqrt{7}} = \frac{2 \cdot \sqrt{7} \sqrt{7}}{\sqrt{7}} = 2\sqrt{7}$