

## HW #6 Final Answers

1.  $3$

6.  $2 - \frac{37}{e^5}$

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

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

3.  $e^{-5} = \frac{1}{e^5}$

8.  $\frac{(2\sqrt{3}-3)\pi}{12} + \ln\sqrt{2}$

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

9.  $\frac{x^2}{2} \arctan x - \frac{x}{2} + \frac{1}{2} \arctan x + C$

5.  $\frac{\pi}{4} - \frac{\ln 2}{2}$

10.  $x \ln(x^2+7) - 2x + \frac{14}{\sqrt{7}} \arctan\left(\frac{x}{\sqrt{7}}\right) + C$

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