

HW #3 Final Answers

1. $\frac{2x}{1+x^4}$

14. $\frac{4\pi}{3}$

2. $\frac{2 + \tan^{-1} x}{1+x^2}$

15. $\frac{\pi^2}{72}$

3. $\sin^{-1} x$

16. $\ln|\sin^{-1} x| + C$

4. $\frac{8}{(1 - \arcsin(\frac{2}{x^4})) \sqrt{1 - \frac{4}{x^8} \cdot x^5}}$

17. $\frac{\pi}{6}$

18. $\ln 2$

5. $\frac{2}{\sqrt{5}}$

19. $\frac{\pi}{12}$

6. $\frac{x}{\sqrt{1+x^2}}$

20. $\frac{1}{2} \arcsin(e^{2x}) + C$

7. $\frac{-16x}{(1+4x^2)^2}$

21. $\frac{7\pi}{36}$

8. $\frac{216x}{(1-36x^2)^{3/2}}$

9. Use L.I.D.S. Style Proof

10. Use L.I.D.S. Style Proof

11. Model After Class Proof

12. $x - \arctan x + C$

13. $\frac{1}{2} \ln|x^2+1| + \arctan x + C$