Mat 115 Worksheet 1 Answers
Tuesday, Oct 3 2017

1. $\frac{x^8}{8} - \frac{x^6}{6} + e^x - \frac{\pi x^2}{2}$

2. $\frac{\sin^3 x}{3}$

3. $\frac{e^t + e^{-t}}{2}$

4. $\frac{1}{2}\cot(2t)$

5. z

6. $-\frac{1}{9}\csc(3\theta)$

7. $\sin^{-1} u$

8. $2x + 3\tan^{-1} x$

9. $\frac{y^2}{2} - \frac{2}{3}y^{-3/2} + \frac{y^3}{3} - 2y^{-1/2}$

10. $y(x) = x^2 - e^{-x} + \frac{1}{e}$

11. (a) $H(t) = -0.8t^2 + 5$, (b) 2.5 seconds, (c) $\frac{5\sqrt{2}}{2}$ seconds

12. $\frac{3}{2} + \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}}$

13. 36 meters

14. 20

15. 6

16. $\frac{\pi}{2}$

17. $\frac{\pi}{3} + \frac{\sqrt{3}}{8}$

18. (a) 8, (b) $12 + 5\pi$

19. (a) 6, (b) 5, (c) $\frac{2}{\pi}$

20. zero