HOMEWORK DAY 7 – *Differentiation formulas §2.3*

Differentiate the following functions. Simplify your answer.

1. §2.3: 1

2. §2.3: 3

3. §2.3: 4

4. §2.3: 6

5. §2.3: 7

6. §2.3: 9 *Answer* : $s(t) = t^{-1} + t^{-2}$, $s'(t) = -t^{-2} - 2t^{-3} = -\frac{1}{t^2} - \frac{2}{t^3} = -\frac{t+2}{t^3}$ (last step is optional)

7. §2.3: 10

8. §2.3: 11

9. §2.3: 12

10. §2.3: 13

11. §2.3: 34

12. §2.3: 35

13. §2.3: 39

14. §2.3: 43

15. §2.3: 46

16. §2.3: 27

17. §2.3: 28

18. §2.3: 79(a,b)

19. §2.3: 84

20. §2.3: 86(a,b)

HOMEWORK DAY 8 – *Derivatives of Trigonometric functions §2.4*

Find the following derivates. Simplify if appropriate.

21. §2.4: 2.

22. §2.4: 3.

23. §2.4: 5.

24. §2.4: 6.

25. §2.4: 7. *Answer* : $\frac{dy}{d\theta} = \sec\theta\tan\theta\tan\theta + \sec\theta\sec^2\theta = \sec\theta(\tan^2\theta + \sec^2\theta)$

26. §2.4: 8.

27. §2.4: 10.

28. §2.4: 40 (A point on a curve has two coordinates (a, b))