

Homework 05

1. Section 3.7: Let f^{-1} be the inverse function of f . Suppose f and f^{-1} are twice differentiable (i.e. both first and second derivative exist). Derive the formula of $(f^{-1})''$ in terms of f' , f'' and f^{-1} .
2. Section 3.8: problems 8, 9, 37, 39, 51 (Hint: take \ln on both sides first), 65, 77, 89, 91, 93, 95, 98.
3. Section 3.9: problems 9, 11, 21, 23, 25, 33, 35, 39, 53, 55.
4. Chapter 3, Practice Exercises (p230-p231): problems 96, 125, 129.
5. Chapter 3, Additional and Advanced Problems (p235): problems 16, 21, 22(d), 23.