Name _____   Due Date: Tuesday, March 3rd, 2015

Review Handout 3   Math 2301

T. Johnson   Score: _____/30

Instructions: Complete this to the best of your ability. If you still do not understand the topics after the class lecture, seek help. The MaRCS tutoring center in the library room 218 is free for all UTEP students. My office hours are also available: Monday 9 – 10 am, Tuesday/Thursday 10:45 am – 11:45 am in Bell Hall 322. **All work should be on a separate page, not this sheet. This is your cover sheet. Staple it!**

Part 1: Find the derivative. Simplify coefficients and rewrite in the same form the function was given. Give all answers in integers or fractions, NO DECIMALS.

1. $f(x) = \dfrac{2}{x} - \dfrac{3}{x^4} + 7x - 12$

2. $g(x) = \sqrt{x} - 17x^2 + 3x - |x|$

3. $h(x) = 4x^{-2} + 3x^2 - 12x + \sqrt[5]{x^3}$

4. $j(x) = \sqrt[3]{x} - \dfrac{6}{x^3} + x^5 - 2x$

Part 2: Find the equation of the tangent line through the given point for each function.

5. $(2, -3)$ with function $f(x) = x^2 - 5x + 3$

6. $(-1, -2)$ with function $g(x) = x^4 - 8x^3 + 9x - 2$

7. $(9, 4)$ with function $h(x) = \sqrt{x} + 1$