

Name _____

Due Date: Thursday, February 26th, 2015

Review Handout 1

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: Evaluate the functions.

1. Let $f(x) = 3x^2 + 2x - 4$. Find the following

a. $f(-3) = 17$

b. $f(-1) = -3$

c. $f(5) = 81$

2. Let $g(x) = 7 - 2x^3 + x$. Find the following

a. $g(-2) = 21$

b. $g(0) = 7$

c. $g(-4) = 131$

Part 2: Multiply the factors and simplify to get a polynomial in simplified form.

3. $(x+3)(x-1) = x^2 + 2x - 3$

4. $(x^2 - 7x)(x+5) = x^3 - 2x^2 - 35x$

5. $(x^2 - 2)(x^2 + 6) = x^4 + 4x^2 - 12$

6. $(x+4)(x^2 - 1) = x^3 + 4x^2 - x - 4$

Part 3: Rewrite the function so that it is ready to take the derivative (no denominators, no roots).

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

8. $g(x) = \sqrt{x} + \frac{4}{x^5} - \sqrt[3]{x} = x^{1/2} + 4x^{-5} - x^{1/3}$

9. $h(x) = \frac{x^2 + 3x - 12}{x} = x + 3 - 12x^{-1}$