Math 101, Littlefield

Homework: Solving Equations (Second Set, With Spreadsheet Checks)

Note: These are different problems from last week!

Part A. Symbolically solve the following equations. For problems 4-7, show at least 2 intermediate steps in the solution process.

1. $d = rt$ for r (distance/rate/time)

2. $A = bh$ for h (area of a parallelogram)

3. $A = \frac{1}{2}bh$ for b (area of a triangle)

4. $S = 2\pi r L + 4\pi r^2$ for L (surface area of a propane tank having cylindrical length L)

5. $A = \frac{1}{2}h(b + B)$ for b (area of a trapezoid)

6. $r = \frac{4.3 - AiR}{i}$ for i (electronics)

7. $\frac{1}{f} = \frac{1}{o} + \frac{1}{i}$ for i (photography)

Part B. Construct an Excel spreadsheet to check that at least three of your symbolic solutions are correct. You can pick any three you like. Doing more than three gets extra credit.

Provide two printouts — one showing values, one showing formulas.

Reference: see "Excel for Algebra Lesson 02: Checking Algebra By Plugging In Numbers". For this assignment, the critical part is what's shown on "Page 3 of 10". <u>Demonstrate by plugging in numbers that both the given equation and your "solved" equation are satisfied by the same sets of numbers.</u> You will have to find for yourself numbers that solve the given equation.