MAT 121 Writing Project #1Fall, 2021Name_____55 PointsEarly Bird (5 points Bonus):Delivered or postmarked by Friday, January 29th.

FORMATTING: This is semi-formal writing, here. That means show some professionalism. You don't have to type it out, but you do need to be very clear. Check out some of the examples I posted, so you won't think I'm expecting DaVinci.

Deadline for full credit: Monday, September 13th. Before solutions post. I will grade all night 'til I'm done, and have graded work scanned and returned by Tuesday, September 14th.

Late Deadline (25% deducted): Thursday, September 16th.

If you want to know what I'm looking for, check out the following links:

Writing Project #1, Spring, 2019

Writing Project #1, Spring, 2019 Solutions (for the Grader) Some extra work is included. And things are a little more cramped than I want to see from the student, because my solutions are likely to be printed multiple times by multiple people. Also, I squeeze in some extra ways of working the problems, sometimes, so my work is a little more cramped than I want yours to be.

If you turn it in on paper in the traditional way:

- 1. Write on only one side of each page. I will not award (or deduct) points for anything on the backs of pages.
- 2. Plain, white, UNRULED 8 1/2 x 11-inch paper only. No Notebook Paper. 8 1/2 x 11- inch paper.
- 3. Carefully staple in the top left corner. If you can't staple it cleanly, use a sturdy paper clip!
- 4. Leave margins, *especially* in the top left corner, where the staple goes. "MAT 121" in big letters in top left corner of every page will keep you from stapling over your work.
- 5. Leave lots of space around your work, in general. No prizes for saving paper. Learn to write it, properly. Plant trees your whole life.
- 6. Write DARK. I don't mind if you use pen. I actually *prefer* it! Just put a line through mistakes of algebra steps. Pencil's OK, but make sure you're getting it DARK. Soft lead helps with that.
- 7. If you work is too faint for me to read, it will receive zero credit.
- 8. Black print/writing against a white background.
- 9. Leave ROOM between problems and between steps on your work. I have bad eyes, so being stingy with space and paper is a mistake on any written work you submit. Don't do work in 2 columns! Don't be shy about using paper. Work in 2 columns (or more) will not be graded. No grade.

How to submit work:

- Mail it to my home: Harry S. Mills, PhD 2358 50th Avenue GREELEY, CO 80634
- 2. Slide it under my door in Ed Beaty Hall on the Greeley Campus: EDBH 134 K
- 3. Scan it to PDF format and E-Mail it to <u>hmills1@online.aims.edu</u> as a PDF attachment that is clear and legible. I WILL NOT ACCEPT ANY FORMAT OTHER THAN PDF. NO GIFs, JPEGs, PNGs or any other format that is not PDF. If you try, I will simply reply with "Please read the instructions for Writing Project #1."

I will not accept college-ruled paper. Use paper without lines.

If your project reaches me by **Monday**, **September 13th**, at 5 p.m., I will have it graded and returned in PDF form, electronically, by **Tuesday**, **September 14th**, before the test. If it's postmarked by **Monday**, **September 13th**, I will grade

it, ASAP, and hopefully get it back to you before you take the test. Submissions postmarked between 10/14 and 10/16, or that are slid under my door after the deadline and before the late deadline, **Thursday**, 9/16, or are e-mailed to me after **Monday**, 9/13 at 5 p.m., I will grade when and if I get around to them, because I'm posting solutions Monday, 9/13 after 5 p.m.

#s 1 – 4 Find all real or non-real solutions x of the following quadratic equations using the quadratic formula. Be sure to *compute the discriminant, first, and separately*. I'm looking for that on tests, as well, *whenever* you use the quadratic formula. It modularizes the work, and it tells you what you're getting into.

- 1. (5 pts) $x^2 + 5x 36 = 0$
- 2. (5 pts) $3.73x^2 + 11.11x 21.73 = 0$ (Round your final answer to 4 decimal places.)

BONUS: (5 pts) Give an exact answer for #2, in simplified radical form, and NO DECIMALS.

- 3. (5 pts) $25x^2 30x + 16 = 0$ (Give an exact answer, in simplified radical form.
- 4. (5 pts) $bx^2 + \pi x 11w = 0$ (Solve for x. Your answers will have letters in them. That's OK!)

#s 5, 6 Solve the following by factoring. You may use the "sledgehammer," if you wish, but write the polynomial in factored form, after you find the solutions, to show you understand the connection between factors and solutions, frontwards and backwards! Give answers as integers or fractions, in lowest terms.

- 5. (5 pts) $x^2 + 5x 36 = 0$ (If you used factoring for #1, say "I already factored this one!"
- 6. (5 pts) $18x^2 27x 110 = 0$

#s 7 - 10 Solve the following by completing the square. Do not use decimals; rather, use *fractions*, as needed, to

complete the square. No 2.5^2 for #8. Add $\left(\frac{5}{2}\right)^2$ on the left-hand side and $\frac{25}{4}$ on the right-hand side. For full credit,

submit final answers in simplified radical form, when rational solutions are not possible.

- 7. (5 pts) $x^2 6x 11 = 0$
- 8. (5 pts) $x^2 5x + 1 = 0$
- 9. (5 pts) $13x^2 + 7x + 4 = 0$
- 10. (5 pts) $3x^2 + 14x 24 = 0$

NOTE: I can't guarantee feedback *before* the test if I don't receive your project by the deadline. Since I post the solutions on Monday before the test, I'm not too interested in grading the work, other than to check you off for full credit. If you get it wrong after the solutions are posted, I'm unlikely to provide much/any feedback on your work.