

Early Bird (5 points Bonus): Delivered or postmarked by Friday, January 29<sup>th</sup>.

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.

**Early-Bird Deadline: Friday, January 29<sup>th</sup>.**

**Official Deadline: Thursday, February 4<sup>th</sup>.**

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.

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, 8 ½ x 11-inch paper only. No Notebook Paper. 8 ½ x 11- inch paper. No rulings.
3. Clasp your project with a paper clip. No staple, please. The Testing Center will be scanning it, so please don't make them remove a staple. Thanks. I'll punch a staple in it at my end. Please leave me room to do so.
4. Leave margins, *especially* in the top left corner, where I put the staple. "MAT 121" in big letters in top left corner of every page, at bare minimum.. You **SHOULD** leave lots of space around your work, in general.
5. Write DARK. I don't mind if you use pen. I actually *prefer* it! Just put a line through mistakes. Pencil's good, but make sure you're getting it DARK. Soft lead helps with that.
6. Black print/writing against a white background. Here are some examples:
  - a. Here's a good one: [Black Print, White Background](#). Plenty of space for teacher comments. Easy to grade.
  - b. Here's a somewhat faint one. I'm not grading faint work. It's just too much work. [Faint Print, White Background](#). Unacceptable. No grade.
  - c. Student takes picture with phone. [Background muddy](#). Low Contrast. Unacceptable. No grade.
  - d. Student uses more than one column to fit more than one problem in the width of the page. [Cramped. No grade](#).
7. 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.**
8. Do Not Send Me GIFs or JPEGs of your work. If you can't make a black-and-white, high-contrast PDF, then don't bother submitting it electronically. I can't process your image very efficiently.
9. How to submit work:
  - a. If you can get it in the mail by the Early-Bird Deadline, I will grade it, ASAP. If it reaches me by the deadline, I will have it graded and returned by Monday before the test. You may mail it or bring it in person to my home:

Harry S. Mills, PhD  
2358 50<sup>th</sup> Avenue  
GREELEY, CO 80634

If you bring it by my house, please drop it in the mailbox, out front.

- b. E-mail a nice, clean PDF scan to [hmills1@online.aims.edu](mailto:hmills1@online.aims.edu), which is also the link “Mills, Steve” in the E-Mail link in D2L.
- c. Slide it under my office door on the Greeley Campus: EDBH 134K I’ll make a Friday run after 5 p.m.

#s 1 – 3 Find all real or non-real solutions 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 face a quadratic expression. It modularizes the work, and it tells you what you’re getting into.

1. (5 pts)  $x^2 - x - 20 = 0$
2. (5 pts)  $2.12x^2 - 5.23x - 4.27 = 0$  (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)  $7x^2 - 4x + 1 = 0$  (Give an exact answer, in simplified radical form.)
4. (5 pts)  $zx^2 - 11rx - 6\pi = 0$  (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)  $x^2 - x - 20 = 0$
6. (5 pts)  $60x^2 - 103x + 44 = 0$

#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 #7. Use  $\left(\frac{5}{2}\right)^2$ . For full credit, final answers in simplified radical form.

7. (5 pts)  $x^2 - 5x + 5 = 0$
8. (5 pts)  $x^2 - 10x - 11 = 0$
9. (5 pts)  $7x^2 + 4x + 13 = 0$
10. (5 pts)  $7x^2 - 33x - 10 = 0$
11. (5 pts) Type at least 3 paragraphs discussing the pro’s and con’s of each method. I’m not expecting a PhD thesis, here, but I am expecting some good writing. If your answer is all one big, long paragraph, you’re doing it wrong, and I will deduct for a wall of words, that isn’t broken into nice, tight paragraphs that express complete ideas.

NOTE: I can’t guarantee feedback *before* the test if I don’t receive your project by the Early-Bird 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.