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. See Course Schedule for due dates. **Staple this page, with your name on it, as a cover sheet for your project. Do not staple your project to your test. This project is due Friday, February 2nd.**

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 paper without lines (8 ½ x 11-inch A4 copier paper works just fine). Paper with lines:
3. Staple top left corner. Do NOT staple over problem numbers or any of your work. If I can't see it, you didn't do it.
4. Leave margins. "MAT 122" in big letters in top left corner of every page solves all problems with margins.
5. Write DARK. I don't mind if you use pen. Just put a line through mistakes. Pencil's good, but make sure you're getting it DARK, i.e., BLACK, with a white background.
6. 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 Writing Projects. **Don't do work in 2 columns!**

For early feedback, make a black-and-white, multi-page PDF and upload it to the D2L drop-box for Writing Project #1. Otherwise, mail your neat, clear, black-and-white, one-side-of-each-page work to me at:

Harry Mills
EDBH 134K
Aims Community College
5401 West 20th Street
Greeley, CO 80634

Alternatively, you may just slide it under my office door in Ed Beaty by or before the deadline: EDBH 134K

Main Resources: Chapter 1 Homework Videos,

Writing Project #1 Videos, and a selection of Old Writing Projects.

#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) $x^2 - 7x - 18 = 0$
2. (5 pts) $3.62x^2 - 9.71x - 15.68 = 0$ (Round your final answer to 4 decimal places. Do NOT round until the very last step.)

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

3. (5 pts) $2x^2 - 6x + 7 = 0$ (Give an exact answer, in simplified radical form.
4. (5 pts) $dx^2 + 3wx - 8\pi = 0$ (Solve for x. Your answers will have letters in them. That's OK!)

#s 5, 6 Solve the following by factoring. You may use a 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) $x^2 - 4x - 77 = 0$
6. (5 pts) $28x^2 - 100x + 75 = 0$

#s 7 – 10 Solve the following by completing the square. **<u>Do not use decimals</u>**; rather, use *fractions*, as needed, to complete the square. No 2.5^2 copping-out for #8. Add a symbolic $\left(\dfrac{5}{2}\right)^2$ to the left side, and a $\dfrac{25}{4}$ as a fraction on the right side. The messy part is writing $11+\dfrac{25}{4}$ on the right side as an *improper fraction*, and there's no ducking it. I expect final answers in simplified radical form, with no decimal points, anywhere. To take your calculator to the next level, you need to know how to manipulate these things, symbolically.

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7. (5 pts) $x^2 + 6x - 15 = 0$
8. (5 pts) $x^2 - 5x - 11 = 0$
9. (5 pts) $2x^2 + 3x - 7 = 0$
10. (5 pts) $5x^2 - 4x + 23 = 0$