

Name: _____ Date: _____

Instructions

Do the following problems on a separate sheet of paper (or two, or three, or four). You are allowed to consult the course text, the class notes, and the notes posted on the course website. You are not, however, allowed to collaborate with other students. **Write the solutions neatly and do not use multiple columns.** Staple your write-up, using this paper as the cover page.

Problem 1. Solve $x^2 - x - 20 \geq 0$.

Problem 2. Solve $2x^2 + 3x - 2 \leq 0$.

Problem 3. Solve $x^2 + 5x + 6 > 0$.

Problem 4. Solve $6x^2 - 17x + 12 < 0$.

Problem 5. Solve $(x + 2)(x - 1)(x - 3) \geq 0$. (Hint: Read “A Counting Magic For Inequalities” from Week 4.)

Problem 6. Find the equation of the line through $(-1, -2)$ and $(4, 3)$.

Problem 7. Find the equation of the line through $(1, -6)$ parallel to the line $x + 2y = 6$.

Problem 8. Find the equation of the line through $(-1, -2)$ perpendicular to the line $2x + 5y + 8 = 0$.