Graded homework guidelines

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These guidelines apply to any homework that is handed in to be graded.

Grading. Your homework will be evaluated for completeness, correctness, and exposition.

(1) To earn full points for **completeness**, the work handed in must be complete. What this means is that each problem was attempted and a full solution was presented. Partial credit will be given for partial attempts. It's worth noting that it's possible to get full points for completeness with an incorrect solution.

(2) To earn full points for **correctness**, solutions turned in must be correct. A solution with gaps in reasoning is not considered to be fully correct, so be sure to fully explain your work. Partial credit will be given for work that is nearly correct, but perhaps has some minor mathematical errors, for example.

(3) To earn full points for **exposition**, solutions turned in must be clearly written. Solutions must use full sentences to describe the work used. Mathematical symbols and terminology must be used correctly. For each problem, the solution that is turned in must be self–contained. This means that if in a few weeks, you look back at the solution, you'll be able to figure out what the problem was and how you solved it.

See the second page of this document for a solution that would receive full points in each category. It is a complete solution. It is a correct solution. It is clearly written (despite my bad handwriting). Note that the equations can be read as part of the sentences that surround them. You should think of "=" as being a verb. Also note that I used enough space so that the solution was easy to read. You should not cram your work into as small of a space as possible. Communicate!

Collaboration. I encourage you to work together on the homework. Working with others frequently makes solving problems easier. Also, explaining your ideas to others will help you to understand the ideas better. If you work with other students on an assignment, you must indicate this to me by writing "collaborated with ⟨name(s)⟩" on your assignment where ⟨name(s)⟩ is the name or names of the students you worked with.

The work you hand in must be your own. What this means in practice is that if you work with other students on an assignment, you should work together on scratch paper or a whiteboard to figure out the solution. You then should each write up your solution to the problem independently. This allows for you to check that you understand the ideas and to get practice communicating by turning your thoughts into a written exposition. You also may find errors that went unnoticed while working together.

Copying others write-ups directly onto your paper is strictly prohibited. If you are unsure about anything related to collaboration, please talk to me and we can figure out what is right.

Example: Where does the graph of $y = x^2 + x - 30$ intersect the x-axis? where does it intersect the y-axis?

A graph intersects the x axis when $y = 0$, so we need to find solutions to

$$x^2 + x - 30 = 0.$$

Factoring, we have

$$(x+6)(x-5) = 0, \quad \text{so}$$

$$x+6 = 0 \text{ or } x-5 = 0.$$

Hence the x-intercepts are at $x = -6$ and $x = 5$.

A graph intersects the y-axis when $x = 0$, so we simply need to plug $x = 0$ into $y = x^2 + x - 30$:

$$y = 0 + 0 - 30 = -30.$$

Therefore the y-intercept is at $y = -30$.