

1. Do not be sloppy: staple your homework and do not turn in paper that has been ripped out of a notebook without removing the tear-away frills on the side.
2. Write complete sentences. Everything you write should be able to be read from top to bottom. Equations are sentences too, so make sure to use punctuation properly! Don't use symbols like  $\therefore$  or  $\implies$  in a sentence mostly words.
3. The symbol  $\rightarrow$  should only be used when discussing maps. For example, the function  $f : \mathbb{R}^4 \rightarrow P(\mathbb{R}^4)$  cannot be onto.
4. The implication symbol is  $\implies$ , not  $\rightarrow$ .
5. Do not turn in rough drafts! Check your work and write your solutions neatly and clearly before turning them in. Make sure that every word or symbol you put on the paper is necessary. Do NOT include work (as in examples) that you did to think through the problem unless it is necessary to the solution. Nothing should be crossed out or out of order.
6. Think about the easiest and simplest way to do something. Don't do extra and unnecessary work.
7. Do not use the word 'it' unless you are 100% sure that it is clear what *it* is referring to. It is best practice to eliminate 'it' (and other words like 'it') from your proofs.
8. Always justify answers unless it is specifically stated not to do so.
9. Cite theorems with proper references to chapters. For example, everyone's favorite, Theorem 4 from Chapter 1 can be written Theorem 1.4.
10. The order in which you present information is important! If you are trying to prove an equality, do not start with the equality that you are trying to prove and show that it implies a true statement. For example,

$$0 = 3 \implies 0 = 0,$$

but that does not prove that  $0 = 3$ . Alternatively, you can start with one expression and show a chain of equalities that end with the other side of the expression you are trying to prove. For example, if you are trying to prove that  $\frac{1}{(x+1)(x-2)} = \frac{-1}{2(x+1)} + \frac{1}{2(x-1)}$ , you can show

$$\frac{1}{(x+1)(x-1)} = \frac{\frac{x}{2} - \frac{x}{2} + \frac{1}{2} + \frac{1}{2}}{(x+1)(x-1)} = \frac{-\frac{1}{2}(x-1) + \frac{1}{2}(x+1)}{(x+1)(x-1)} = \frac{-1}{2(x+1)} + \frac{1}{2(x-1)},$$

where each expression follows from the previous.

11. If you are asked to find a solution to a matrix equation,  $A\mathbf{x} = \mathbf{b}$ , present the solution in the form

$$\mathbf{x} = \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_n \end{bmatrix}. \text{ Do not just list the values of } x_1, x_2, \dots, x_n, \text{ unless specifically directed.}$$

NOTE: If you are interested in learning to type in L<sup>A</sup>T<sub>E</sub>X(it is a good skill to have and comes in handy in many courses and situations), reach out to the department and they will put you in contact with me or another student who can help you learn it.