

## How I grade regular math assignments ...

I expect you to do **every** problem on **every** assignment before you get to class. If you should come across a problem on which you are absolutely unable to make a valid attempt (and that means every part of problems which have more than one part), you can instead write an explanation.

That explanation must include

1. a statement of the problem itself in your words,
2. a description of what you do and do not understand about that problem and other problems of that type, and
3. *particular* questions you need answered so that you *can* do the problem.

Here's an example. I got it from an SAT review book.

A solution is made by mixing  $a$  quarts of pure salt with  $b$  quarts of water. What is the percent solution of the salt?

You have no clue. Here's what you write:

The problem wants me to find the “percent solution” of salt after I mix up salt and water. I know how to find a percentage — like if you said there were 12 quarts of salt and 100 quarts of water, that's 12% salt, right? But I don't know how to do that with variables. And in my example, I'm not sure whether I should really do 12 divided by 100, or maybe 12 divided by 112 — whether I'm supposed to put the amounts together or not. So first I'd need to know whether I'm supposed to total up the salt and the water, and then I'd have to figure out how to do the division with the variables.

You'll notice that this explanation is longer than just working the problem if you knew what to do. You also *might* have noticed that the explanation misses something in what was done to get 12%. You don't just divide; you still must multiply by 100 to move the decimal place. But the explanation restates the idea of the problem and tells both what the student does and does not understand.

So why am I making you do this? By the time you've written an explanation like that, you know pretty much what to ask about, and have thought about how to use that information to get an answer. You ask me, you ask another student, you ask your older brother, ... and it also shows me where your lack of understanding is, which helps me both address your problems in comprehension and to assess overall what I might need to make more clear to the class.

In the past, most (maybe all) of you have turned in a math assignment in some class in which next to one of the problem numbers, you have written a big **?** and moved on. But that doesn't let the teacher see into your thought processes.

*“Okay, I get that,” you're thinking, “but what if I need more practice than that? You can't possibly expect me to really be good enough at this after one problem of a certain type, can you? We used to do pages of factoring back in algebra class!”* And that's where the BAT problems come in. “BAT” is my incredibly lazy abbreviation for “Be Able To.” On your assignment sheet, you'll find brief lists of problems from the book that are underlined and preceded by the letter R, for “required.” Then there's a huge list of problem numbers preceded by BAT. Those are problems you should Be Able To do. Here's a vital point: NO ONE should do them all. NO ONE. Super Student Number One should NEVER

attempt to do all of the “BATting practice.” (I know, clever pun.) And SSNO is the kid who’s never skipped a math problem in her entire life, because she likes doing that stuff. But doing all of them would be a waste of time. The point of the BAT problems is that if you need extra practice on something, they’re there, and if you’re not sure you get a concept there are some additional examples to practice on or ask me about.

There are some cool problems in the BATs, and if you’re up for a challenge, you might want to look at some of the questions not included there, many of which start with “Prove that…” — but you won’t have to turn those in.

So, now that I’ve settled how to do the assignments, on to the really important part — the grading. Each of these ordinary assignments will be worth 10 points. Yes, I know that makes the longer ones count the same as the shorter ones. And I don’t care. Think of it as a gift that sometimes the assignments are only half as long. To earn those 10 points, though, you have to get the problems completed on time.

At the very beginning of class, as soon as the bell rings, and before I stop to take roll or answer your questions or even walk back to turn off the music, you’ll have your assignment on top of your desk for me to look at. That means not in your notebook or in your textbook or at the bottom of your book bag. On your desk. On TOP. Where I can see it.

I’ll walk around with my thumbs up rubber stamp, in an order that will change from day to day. If you have attempted all of the assigned problems, you get two thumbs up stamps. (I was inspired by the late Gene Siskel.) If you have done at least half of the assignment, but have not completed it, you get one thumb up, and one thumb down. (After much thought, I have figured out how to do this without purchasing a second stamp.) And if you have less than half done, you get no stamps. I won’t wait for you to dig out the work. It’s your responsibility to be ready to go.

Each thumbs up on the assignment is worth 3 points. Two stamps is already 6/10. The other four points are based on whether you get correct answers to problems that I spot check. Does this mean that you might lose a point if you wrote an explanation of what you didn’t understand? Yep. But you’d lose three points if you didn’t do the explanation, because you’d be one thumb down. And what if you get the work in late without an assignment pass? No stamps for you — your maximum possible score is 4/10.

After I’ve checked for completion, we can discuss some of the problems before you turn in the assignments (provided there’s time for that). But the completion check is FIRST, and it’s RIGHT AWAY.

*Note that this procedure is only for regular assignments.* It does not apply to IB portfolio assignments or calculus free response assignments, because they’re worth more points. But I still may use the thumb to indicate whether you have completed the work before you get to class. I’ll tell you about the late policy for that when the time comes. You’ll know when it’s an assignment that works differently.