Hi, I'm Greg. I'm a tutor in NYC! I love helping students. I tutor many subjects, assist with homework help, etc. I mainly specialize in specialized/standardized tests.

What is this? I don't always have time to do a livestream, therefore instead I thought it would be fun to do a Problem Of The Day series. In this series I will put up a problem and you guys will then analyze it, and come up with possible solutions and alternative solutions on your own. I'll eventually post the answer. In the past this has resulted in many interesting discussions. Some questions will be easy, others hard, some perhaps with a twist, some will be SHSAT 8 oriented while some SHSAT 9 oriented.

I'll leave a problem up for about an hour, however depending upon the dynamics and complexity of the question it could be much longer. Unlike my AMA (Ask Me Anything) livestream sessions, I may not always be able to join in the discussion. Again, the idea is for you guys to discuss things out.

Please be respectful in this endeavor. Let's keep this fun, educational, and forward-thinking. Keep your comments within this spirit. If needed, feel free to email me at GregsTutoringNYC@gmail.com. Past questions are at https://www.GregsTutoringNYC.com/POTD

HERE'S THE PROBLEM: <——
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23456 students registered for the SHSAT. Of those, 13579 said they would bring their own pencils and 12345 said they would bring their own erasers. What is the least possible number of students who could be bringing both pencils and erasers?

A. 1234
B. 2468
c. 9877
D. 11111
E. 12345

HERE'S THE SOLUTION:
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The sum of those students bringing their own pencil and those students bringing their own eraser is 13579 + 12345 = 25924. This is more than the total of 23456 students as this sum includes some students twice.

We cannot use 12345 as the least because we don't know exactly how many eraser bringers will also be pencil bringers.

However, if we subtract to remove duplicates 25924 − 23456 = 2468 then that is the least number of students to bring both. This means we can only be sure about this for about 10% of all the students. Of course, many more may bring both, but we have no way to determine that from the information provided.

Choice B

— Greg / GregsTutoringNYC@gmail.com   LLAP ☺