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: <———
==========
If w is a negative odd integer, which one of the following must be an even positive integer?

A. |w| + 2
B. |w + 2|
C. -2w + 9
D. 0.5(-w - 1) + 2

HERE'S THE SOLUTION:
==========
Although the use of the absolute value of w in Choice (A) will yield a non-negative value, merely adding 2 to something will not automatically make it even. So (A) fails.

Choice (B) runs into a similar situation. That is, merely adding 2 does not make something even, therefore doing that doesn't follow, even if we absolute value it. So (B) fails too.

Choice (C) attempts to provide us an even and a positive by multiplying by 2 and flipping the sign of the negative number. However, adding 9 to an even positive number yields an odd positive number. We're looking for an even positive.

Through process of elimination that leaves Choice (D) as the answer. But don't be satisfied with that, let's make sure it's right. The expression -w flips the sign of w so now it is a positive temporary value that is odd. Subtracting 1 from it will make it even. Multiplying by 0.5, that is 1/2, is the same as division by 2, and dividing an even number by 2 yields an even number. There is one last gotcha being that if w was initially -1. That would end up with 0.5(-w - 1) being 0. So we'd need to add 2 to ensure it was positive. Aren't number types fun?

- Greg / GregsTutoringNYC@gmail.com   LLAP ☮