

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](mailto:GregsTutoringNYC@gmail.com). Past questions are at <https://www.GregsTutoringNYC.com/POTD>

HERE'S THE PROBLEM: <—

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A cook roasts 50 kernels of popcorn on a stovetop and finds that only 58% of the kernels have popped. The cook also knows a way to reheat kernels so that 25% of initially unpopped kernels can pop. If the cook roasts 150 more kernels, what is the total number of kernels that the cook can expect to pop?

HERE'S THE SOLUTION:

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The cook roasts 200 kernels in total. 58% of 200 maps into  $58/100 \times 200 = 116$  kernels in total pop straight up.

That means  $200 - 116 = 84$  kernels did not pop. 25% of 84 maps into  $25/100 \times 84 = 21$ .

$116 + 21 = 137$  total kernels popped.

We could have also noted that if 58% initially pop then  $100 - 58 = 42\%$  initially don't pop. 25% of 42 is 10.5, therefore 10.5% of the total kernels reheated pop. Therefore that means  $58 + 10.5 = 68.5\%$  of all kernels end up popped.

68.5% of 200 maps to  $68.5/100 \times 200 = 137$  total kernels popped.

- Greg / [GregsTutoringNYC@gmail.com](mailto:GregsTutoringNYC@gmail.com) LLAP ☺