

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: <—

=====

A pet shop had 224 goldfish on Monday. Some goldfish eggs hatched and on Tuesday the ratio of goldfish from Monday to Tuesday was 7 : 8. Some more goldfish eggs hatched and on Wednesday the ratio of goldfish from Tuesday to Wednesday was 4 : 5. How many goldfish were there on Wednesday?

HERE'S THE SOLUTION:

=====

To find out how many goldfish there were on Tuesday we can set up a proportion:

$$\frac{7}{8} = \frac{224}{t}$$

Solving we get $t = 256$.

To find out how many goldfish there were on Wednesday we can set up a similar proportion with the new ratio and value:

$$\frac{4}{5} = \frac{256}{w}$$

Solving we get $w = 320$. There were 320 goldfish on Wednesday.

We can also note that the Tuesday count is $\frac{8}{7}$ of Monday, and the Wednesday count is $\frac{5}{4}$ of Tuesday. We therefore can express this as:

$$\frac{224}{1} \times \frac{8}{7} \times \frac{5}{4}$$

7 divides into 224 32 times and 4 divides into 8 twice, hence we get $32 \times 10 = 320$

- Greg / GregsTutoringNYC@gmail.com LLAP ®