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

As it turns out, I haven't been able to get to do as many livestreams as I have in past years (yet, hopefully that changes).  Therefore, I thought it would be fun to start a Problem Of The Day Series.  I will put up a problem and leave it running for a while.  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 some manner.

For now we'll play it by ear how that will happen and for how long I'll leave up a problem.  But right now I'm thinking of keeping the problem up maybe 2 hours minimum and maybe even in some cases 4 or 5 hours depending upon the dynamics and my situation.  Unlike my AMA (Ask Me Anything) lifestream sessions, I will not be checking in every few minutes although I may from time to time join into the discussion.  Again, the idea is for you guys to discuss out the problem.

Please be respectful to each other in this endeavor and let's make this fun, educational and forward-thinking.  Keep the comments within the spirit of what I'm doing here.  Please email me at GregsTutoringNYC@gmail.com if needed.

HERE'S THE PROBLEM:  <———
==========

A restaurant has been told that their usual maximum allowed customer capacity of 312 can now be only 25% of that maximum.  The restaurant has been able to designate 24 tables that can accommodate either tables of 2 or tables of 4.  When the restaurant is filled to capacity under this new quota, what is the maximum number of tables of 2 that can be used?

HERE'S THE SOLUTION:
==========

25% of 312 is 78

(A) twos + fours = 24
.: fours = 24 − twos

(B) 2 x twos + 4 x fours = 78
Substitute .: 2 x twos + 4(24 − twos) = 78
2 x twos + 96 − 4 x twos = 78
−2 x twos = −18
.: twos = 9 .: fours = 15

Check:
9 + 15 = 24
2(9) + 4(15) = 18 + 60 = 78

We could have also solved this by normalizing (A) against (B) and cancelling out either twos or fours, so let's get rid of fours by multiplying (A) by 4:

4(twos + fours = 24)
(A') 4 x twos + 4 x fours = 96

Now lets subtract (B) from (A'):

```
  4 x twos + 4 x fours = 96
- 2 x twos + 4 x fours = 78
---------------------------
  2 x twos             = 18
```

.: twos = 9, as we got earlier

- Greg / GregsTutoringNYC@gmail.com   LLAP ☮