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
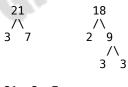you guys to discuss out the problem.

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: <——————
===================

The QB99 Local bus leaves SHSAT Central every 21 minutes. The QB99 Express bus leaves
SHSAT Central every 18 minutes. If they both leave at midnight, how many times a day do
both buses leave together before finally heading to the depot?

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

To find out how often they meet we could create a list and just see when they match. That
can be tedious. Instead let's get the LCM. The prime factors of 21 and 18 are:

```
 21           18
 /\           /\
3  7         2  9
               /\
              3  3
```

21: 3, 7
18: 2, 3, 3
.: LCM = 2 x 3 x 3 x 7 = 126

We could have also computed the prime list with a table:

```
2|21  18
3|21   9
3| 7   3
7| 7   1
 | 1   1
```

This means the busses meet ands leave together every 126 minutes

As 1 day = 24 x 60 = 1440 min .: 1440 / 126 = 11.42

That's 11 times for sure, plus midnight .: 11 + midnight = 12

— Greg / GregsTutoringNYC@gmail.com   LLAP ☺