Comments on Quiz 8:

- It would be helpful if you look over the homework you did days prior to the quiz and looked over what we did on the homework in class. There were only two exercises that you had for homework since the last quiz that you had to study.
- The answers were in the footnote at the bottom of the page. The first answer is 1013, and the second answer is 2010.
- In the second problem, you should reduce the congruences to congruences involving pairwise relatively prime moduli before attempting to look at the solutions to the system of congruences. You should get that you want n that satisfy the system

$$x \equiv 0 \pmod{5}$$
$$x \equiv 1 \pmod{49}$$
$$x \equiv 2 \pmod{8}.$$

- If you use the method that we had in class for solving this system, you would get

$$x = 0 \cdot (\text{something not important}) + 1 \cdot 40 \cdot 38 + 2 \cdot 245 \cdot 5 = 3970.$$

  This gives you **ONE** solution. The point of this method is to figure out **ONE** solution. But why would you do this work when I gave you **ONE** solution in the statement of the problem The number 50 is a solution. (Just like in the homework problem that this was related to, there is no reason to calculate a solution if one is given to you.)

- Given 50 is a solution and $5 \cdot 49 \cdot 8 = 1960$, all the solutions are given by $50 + 1960k$, where $k \in \mathbb{Z}$. The smallest solution > 50 is $50 + 1960 = 2010$.