Each WA is worth **10 points** total. Work right on these pages. You can work together or see a tutor, but NEVER copy. This WA is for a grade, so dishonesty or cutting corners may earn a 0 for all involved.

1. *[3 pts]* Carefully demonstrate YOUR choice of listing or prime factorization to find both the GCD and LCM (tell which is which) of 45 and 72.

2. *[1 pt]* Clearly demonstrate the Euclidean Algorithm to find GCD(1350, 5000).

3. *[1 pt]* Two numbers have a GCD of 8 and an LCM of 81312. One of the numbers is 968. What is the other number? Show work, and clearly indicate your answer.

4. *[1 pt - 0.5 pts]* Translate each ratio below to a complete, verbal sentence that MEANINGFULLY uses "for every" or "out of every."

   (a) A ratio of 1:3 for green hats to white hats

   (b) A ratio of 4:5 for female students to students

5. *[2 pt - 1 each]* Draw and fully label a rectangle diagram for each ratio below, then tell which type it is: part-to-part or part-to-whole.

   (a) A state legislature currently has a Democrat-Republican ratio of 8:9 (and no other political parties). What is the ratio of Republicans to representatives?

   (b) Now complete the sentence below to describe a ratio of the OTHER type that is based on the above information:

   The ratio of _____ *to* _____ *is* _____ *to* _____ .

6. *[2 pts - 1 each]* Draw and fully label a rectangle diagram for each ratio below, then tell which type it is: part-to-part or part-to-whole.

   (a) A certain birth defect occurs for 3 out of every thousand births. What is the ratio of those who don't have the defect to those who do?

   (b) Now complete the sentence below to describe a ratio of the OTHER type that is based on the above information:

   The ratio of _____ *to* _____ *is* _____ *to* _____ .