Submitting Your Work

1. Answer each question using the suggested method.
2. Your answer should be completed using an appropriate computer based tool that you are comfortable using.
3. You cannot submit photographs of hand drawn solutions.
4. Make sure your solution contains the answer required and a short paragraph of your method. (4 or 5 sentences should be enough, don't go crazy).
5. Gather all your solutions into a single Word document (or equivalent). Convert this Word document into a PDF file.
6. Upload a single PDF document containing all your solutions.

Eliminating Possibilities

You should use the eliminating possibilities method to try solving each of the following problems.

1. SQUARE ROOTS

The square root of 4356 is an integer. Without a calculator, determine what that integer is by eliminating possibilities. Do the same for 8464

3. HOW MANY LINES?

Stu counted the lines of a page in his book. Counting by three gave a remainder of 2, counting by fives also gave a remainder of 2, and counting by sevens gave a remainder of 5. How many lines were on the page?

4. THE THREE SQUARES

Three cousins, Bob, Chris, and Phil, were sitting around watching football on TV. The game was so boring that they started talking about how old they were. Bob (The oldest) noticed that they were all between the ages of 11 and 30. Phil noticed that the sum of their ages was 70. Chris (The youngest) pointed out, "if you write the square of each of our ages, all the digits from 1 to 9 will appear exactly once in the digits of the three squares". How old was each person?

You should try use logic to try solving each of the following problems.

1. THE FISHING TRIP

Several friends take a fishing trip every year. Each year they have a contest to see who catches the heaviest fish. The loser has to pay for all of the junk food they eat on the trip. Determine each friend's standings in this year's contest by using the following clues. By the way, in the tradition of fishing trips, every statement quoted here is a falsehood.

Marta: Mickey was first

Woody: I beat Sally

Sally: Marta beat Woody

Mickey: Woody was second

2. VOLLETBALL TEAM

Three friends – Elaine, Kelly, and Shannon – All start for their college volleyball team. Each plays a different position: setter, middle blocker and outside hitter. Of the three, one is a first year, one a 2nd year and the other is a 4th year. From the clues below, determine each woman's position and year in college.

1. Elaine is not the setter
2. Kelly has been in school longer than the middle blocker
3. The middle blocker has been in school longer than the outside hitter
4. Either Kelly is the setter or Elaine is the middle blocker.

3. ATHLETES

Russ, Don, Pamela, and Yvonne are the first names of four friends who all received sports scholarships. Krieger actually has a full scholarship, because he is a star in two different sports. Use the clues to determine each person's full name.

1. Hicks and Russ play on the same men's volleyball team.
2. Drake and Braun have both set women's records in swimming
3. Yvonne and Drake both went to the same high school.

4. EXPERTS

Abbie, Bridget, Clare, and Demi are women whose professions are water quality engineer, soil contamination scientist, air pollution consultant, and biological diversity advocate. Match each woman to her expertise using the following four clues.

1. Bridget's expertise is not biological diversity
2. Abbie loves to garden, but her expertise has nothing to do with soil or air pollution.
3. The air pollution expert, the water quality engineer, and Demi all met one another at a global warming conference.
4. Bridget has never met the person who works on air pollution.

Classic Problems (Try to solve this problems, using any method you like)

1. TURKEYS

Among Grandfather's papers a bill was found: **72 Turkeys = €_67.9_**

The first and last digits of the number that obviously represented the total price of those fowls are replaced here by blanks, for they have faded and are now illegible. What are the two faded digits and what was the price of one turkey?