- Could you construct two random variables that are dependent but correlation is 0? (Hint: X standard normal, $Y = X^2$).

- Flip a coin 100 times, what is the probability that has more than 60 heads? (Hint: central limit theorem)

- X, Y and Z has the same correlation, what is the lower bound for the correlation? (Solution: -0.5)

- How to determine whether a point is inside a triangle or not? (Hint: convex combination)

- Give an example that you need to use virtual destructor? (Solution: class hierarchy)

- Static member initialization: in a template and in a class? (Solution: same as the number of template class)

- How to find the largest k elements in an array? (Solution can be found in quiz 1)

- Could you explain what is delta hedge?

- Expected time for Wt to hit boundary +-1? (Solution: 1)

- What are the common variance reduction techniques? (Solution: control variate, importance sampling, stratified sampling, authentic sampling)

- Draw a r.v. from a continuous distribution, if the current number is smaller than the previous one, you stop. What is the expected number of r.v. you need to draw? (Solution: e)