

## Quiz #6 STAT 301

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1. Four individuals have responded to a request by a blood bank for blood donations. None of them has donated before, so their blood types are unknown. Suppose only type O is desired and only one of the four actually has this type. If the potential donors are selected in random order for typing,
  - a) what is the probability that at least three individuals must be typed to obtain the desired type? (Hint: it is the same as the event that the first and second are not of type O).
  - b) What is the probability that the second is of type O? (Hint: that is, first is not, and the second is. Use the product rule).
  - c) Given that at most two individuals must be typed, what is the probability that the second is of type O?