Problem of the Week

Problem B

Luck of the Draw

James' classroom is organizing a draw to give out a prize which is a "MATHIE" T-shirt. Possible ways to organize the draw are presented below.

a) Tiles with the whole numbers from 0 through 9 are thrown into a hat. Each tile has a single digit on it. Each digit is represented exactly once. Without looking, you reach in and draw out one tile. You will win the draw if you pull out a 9. What is the probability of winning this draw?

b) Tiles with the letters A through Z are thrown into a hat. Each tile has a single letter on it. Each letter is represented exactly once. Without looking, you reach in and draw out one tile. You will win the draw if you pull out an X or a Z. What is the probability of winning this draw?

c) Tiles with the whole numbers from 1 through 4 are thrown into a hat. Each tile has a single digit on it. Each digit is represented exactly once. Without looking, you reach in and draw out two tiles. You will win if your two tiles, placed side-by-side, can form the number 13. What is the probability of winning this draw?

d) Which of the above draws has the greatest probability of winning the T-shirt?