MATH230 Discussion Quiz 2

20 minutes, 10 points total, closed note

True or false (1 point): The empty set has 0 permutations

Combinatorics (3 points each)

2: After buying a plane ticket to Ohio, you may choose to refund it before the day of the flight or not. On the day of the flight, you may show up or miss it. On the plane, you can have water or ginger ale. After landing in Columbus, you can choose to enjoy the city or stay in your hotel. After making that decision, free will no longer exists in Ohio. After the vacation, you can stay in Ohio and fail MATH230, or come back to Newark. How many outcomes are there?

3: How many ways are there to arrange the letters of the word "letters" if the letter 'r' must be last?

Probability (3 points)

5: The probability of events A, B is 0.3, 0.5 respectively. Find the minimum probability that neither A nor B happens; justify.