

A. Basic Terminology and Principles of Probability

1. A coin is tossed. What is the sample space for this experiment?
2. A die is rolled. What is the sample space for this experiment?
3. Assuming that having a baby boy or having a baby girl are equally likely, what is the probability that a baby born will be a baby boy? Express your answer as a percentage.
4. A letter from the alphabet is selected at random. What is the probability of the simple event that the letter will be an "r."
5. What is the probability of the simple event of rolling a die and having it come up a 4? Express your answer as a decimal.
6. What is the probability of the simple event of randomly drawing a card that is a heart from a normal deck of cards (with no jokers)? Express your answer as a percentage.
7. What is the probability of the simple event of randomly drawing a six (of any suit) in a regular deck of cards (with no jokers)?
8. A box contains a pair of socks of each of the following colors: black, blue, purple, and white. Assuming that any of the 8 socks has an equal chance of being drawn, what is the probability of the simple event of randomly drawing a white sock? Express your answer as a fraction.
9. In the situation described in Problem 8, what is the probability of the event of randomly drawing either a black or a blue sock?
10. A die is rolled. What is the probability of the event that it does not come up a 6? (Reword the question so it asks what numbers need to be rolled other than 6.)