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Exercise 7

1. Rolling a die and having a number greater than 5

$$P(X > 5) = \frac{1}{6} \quad (\text{only one of six numbers is greater than 5})$$

2. $P(X = 6) = P(X > 5) = \frac{1}{6}$

3. Selecting a card from a standard pack that is R

$$P(X \text{ is Red}) = \frac{26}{52} = \frac{1}{2}$$

half of 52 cards are red

4. Selecting an Ace

$$P(X \text{ is an Ace}) = \frac{4}{52} = \frac{1}{13}$$

4 aces in a deck of cards

5. Flipping a (fair) coin + getting heads

$$P(X = \text{heads}) = \frac{1}{2}$$