

Independent Events

Rolling Dice (Six sided)

Probability of Rolling a 5

$$P(A) = \frac{1}{6}$$

ways to get success
total Possible Outcomes

5R 6B 4G Independent

$$P(G) = \frac{4}{15}$$

$$P(G) = \frac{3}{14}$$

Dependent

Independent Event - when 2 events occur in such a way that the probability of one doesn't rely on the probability of the other.

Dependent Event - when the outcome of two or more events, affect each other.

Ex: Rolling a 5 and Flipping A Head on a coin.
Independent.

Ex: Rolling a 5 then Rolling a 6
Independent.



Venn
Diagram



2 cards are drawn from a deck
 What are the ^{Probability} that they
 are both face cards.

$$\frac{12}{52} \times \frac{11}{51} = \frac{132}{2652}$$

Intersection
AND

$$P(A) \frac{12}{52}$$

AND

$$P(A \cap B)$$

$$P(B) \frac{11}{52}$$

OR

$$P(A \cup B)$$

↑
Union

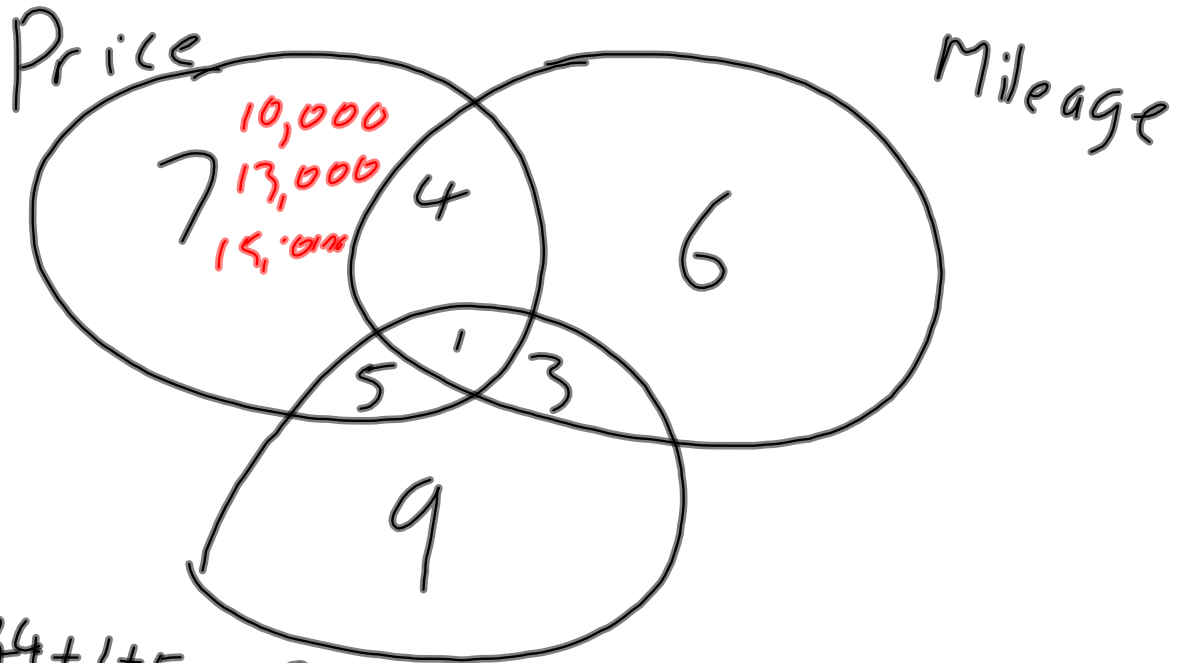
Pairs of Gloves: Blue, Red, White,

Black $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$

What are the odds of pulling
a black or a Red

$$\frac{1}{3} + \frac{1}{3} = \frac{2}{3} \quad P(A \cup B) \text{ OR}$$

Red, Black, White



$7 + 4 + 1 + 5 + 6 + 3$ Safety
 $10 + 10 + 6 = 26$