





$$P(L/r) = \frac{4}{4+20} = \frac{1}{6}$$

$$= 0.1666$$

$$= 16.66\%$$

$$\underbrace{A \cap B} = B \cap A$$

$$P(A/B) \times P(B) = P(B/A) \times P(A)$$

$$P(A/B) = \frac{P(B/A) \times P(A)}{P(B)}$$



$$= P(\text{Black})$$

→ Event A



$$= \frac{1}{4}$$

→  $P(B|A)$

conditional Probab

Today (Sunny & Hot)

$$P(\text{yes}/\text{Today}) = \frac{P(\text{sunny}/\text{yes}) \times P(\text{Hot}/\text{yes}) \times P(\text{yes})}{P(\text{sunny}) \times P(\text{Hot}) + P(\text{sunny}) \times P(\text{not hot}) \times P(\text{no}) + P(\text{not sunny}) \times P(\text{Hot}) \times P(\text{no}) + P(\text{not sunny}) \times P(\text{not hot}) \times P(\text{no})}$$

$$P(\text{yes}/\text{sunny \& hot}) = \frac{P(\text{sunny}) \times P(\text{Hot})}{2/9 \times 4/14 + 2/9} =$$



$$P(Y/x) = \frac{P(x/y) \times P(y)}{P(x)}$$

$$P(Y/x, t_2) = \frac{P(x, t_1)}{P(x) + P(t_2)} \times \frac{P(t_2/y) \times P(y)}{P(y)}$$

$$P(A/B) = \frac{P(B/A) \times P(A)}{P(B)}$$

品品

Dear, friend, = Normal

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Congratulation, money

= SPAM



$$= \frac{0+1}{4+8} = \frac{1}{12}$$