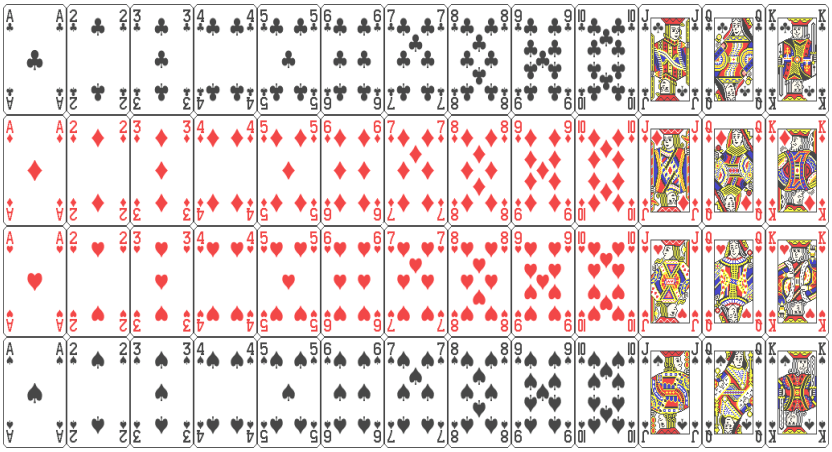
Conditional Probability

P(A | B) asks that we find the probability of A given that we know B has or already occurred. Using a formula find the probability of A given B can be found using $\mathbf{P(A \mid B)} = \frac{\text{P(A and B)}}{\text{P(B)}}$

CONDITIONAL PROBABILITY

1. Determine the following **conditional** probabilities.

   Consider drawing 1 card from a standard deck of shuffled cards:



i. P(Queen | Face Card) = *Reduced Fraction:*

ii. P(Ace | Lettered Card) = *Reduced Fraction:*

iii. P(Heart with a Number | Red Card) = *Reduced Fraction:*

iv. P(Card with a Letter| King) = *Reduced Fraction:*

v. P(number less than 6 | Face Card) = *Reduced Fraction:*

vi. P(Odd Number | Numbered Card) = *Reduced Fraction:*

2. Consider the following table with information about all of the students taking Statistics at Phoenix High School.

A. P(Full-time | Male) = *Reduced Fraction:*

B. P(Male | Full-time) = *Reduced Fraction:*

C. P(Female | Part-time) = *Reduced Fraction:*

D. P(Full-time | Part-time) = *Reduced Fraction:*

	Full-time	Part-Time	Total
Female	28	15	43
Male	12	16	28
Total	40	31	71