Conditional Probability with Playing Cards Worksheets

REFERENCE / CASE 1

One card is drawn uniformly from a standard 52-card deck with no jokers. Given that it is a red card, what is the probability it is a heart? Face cards are J, Q and K; aces are not numbered 2 through 10.

Suit	Cards
Hearts	13
Diamonds	13
Clubs	13
Spades	13

METHOD: The condition restricts the sample space to 26 cards. 13 of those satisfy the event, so the conditional probability is 13/26.
Use the separate practice sheet before checking the answer.

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REFERENCE / CASE 2

One card is drawn uniformly from a standard 52-card deck with no jokers. Given that it is a face card, what is the probability it is a king? Face cards are J, Q and K; aces are not numbered 2 through 10.

Suit	Cards
Hearts	13
Diamonds	13
Clubs	13
Spades	13

METHOD: The condition restricts the sample space to 12 cards. 4 of those satisfy the event, so the conditional probability is 4/12.
Use the separate practice sheet before checking the answer.

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REFERENCE / CASE 3

One card is drawn uniformly from a standard 52-card deck with no jokers. Given that it is a black card, what is the probability it is a spade? Face cards are J, Q and K; aces are not numbered 2 through 10.

Suit	Cards
Hearts	13
Diamonds	13
Clubs	13
Spades	13

METHOD: The condition restricts the sample space to 26 cards. 13 of those satisfy the event, so the conditional probability is 13/26.
Use the separate practice sheet before checking the answer.

Conditional Probability with Playing Cards Worksheets

REFERENCE / CASE 4

One card is drawn uniformly from a standard 52-card deck with no jokers. Given that it is a card numbered 2 through 10, what is the probability it is a seven? Face cards are J, Q and K; aces are not numbered 2 through 10.

Suit	Cards
Hearts	13
Diamonds	13
Clubs	13
Spades	13

METHOD: The condition restricts the sample space to 36 cards. 4 of those satisfy the event, so the conditional probability is 4/36.
Use the separate practice sheet before checking the answer.