EXAMPLE
If you choose a card out of a 52-card deck, what is the probability that you will get a Queen?

There are 4 Queens in a deck of cards, so the probability is $\frac{4\ Queens}{52\ Cards}$.

$\frac{4\div4}{52\div4} = \frac{1}{13}$
$\rightarrow 1 \div 13 = 0.077$

Original Fraction:	$\frac{4}{52}$
Reduced Fraction:	$\frac{1}{13}$
Decimal:	0.077
Percent:	7.7%

EXAMPLE
If you choose a card out of a 52-card deck, what is the probability that you will get a Queen, given that you already removed all of the Aces?

If you remove the four aces, there will only be 48 cards left, so $\frac{4\ Queens}{48\ Cards}$.

$\frac{4\div4}{48\div4} = \frac{1}{12}$
$\rightarrow 1 \div 12 = 0.083$

Original Fraction:	$\frac{4}{48}$
Reduced Fraction:	$\frac{1}{12}$
Decimal:	0.083
Percent:	8.3%

EXAMPLE
If you choose a card out of a 52-card deck, what is the probability that you will get a Queen, given that all of the hearts had been removed?

If you remove the hearts, that means 13 less cards & 1 less Queen, so $\frac{3\ Queens}{39 Cards}$.

$\frac{3\div3}{39\div3} = \frac{1}{13}$
$\rightarrow 1 \div 13 = 0.077$

Original Fraction:	$\frac{3}{39}$
Reduced Fraction:	$\frac{1}{13}$
Decimal:	0.077
Percent:	7.7%

1. If you choose a card out of a 52-card deck, what is the probability that you will get a black card?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

2. If you choose a card out of a 52-card deck, what is the probability that you will get a black card, given that you already removed all of the red face cards?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

3. If you choose a card out of a 52-card deck, what is the probability that you will get a black card, given that you had removed the 2 of spades but then put it back in the deck?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

4. If you choose a card out of a 52-card deck, what is the probability that you will get a 2 or a King?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

5. If you choose a card out of a 52-card deck, what is the probability that you will get a 2 or a King, given that all of the face cards had been removed from the deck?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

6. If you choose a card out of a 52-card deck, what is the probability that you will get a black or a red card?

Original Fraction:	
Reduced Fraction:	
Decimal:	
Percent:	

7. If you choose a card out of a 52-card deck, what is the probability that you will get a blue card?	8. If you choose a card out of a 52-card deck, what is the probability that you will get a 6 of Diamonds?	9. If you choose a card out of a 52-card deck, what is the probability that you will get a 6 of diamonds, given that you already removed all of the 6's from the deck?
Original Fraction: Reduced Fraction: Decimal: Percent:	Original Fraction: Reduced Fraction: Decimal: Percent:	Original Fraction: Reduced Fraction: Decimal: Percent:
10. If you choose a card out of a 52-card deck, what is the probability that you will get an even number card?	11. If you choose a card out of a 52-card deck, what is the probability that you will get an even number card or an odd number card?	12. If you choose a card out of a 52-card deck, what is the probability that you will get an even card, given that a 7, a 5 and a 4 were removed from the deck but the 5 were put back into it?
Original Fraction: Reduced Fraction: Decimal: Percent:	Original Fraction: Reduced Fraction: Decimal: Percent:	Original Fraction: Reduced Fraction: Decimal: Percent:

Probability of One Event Answers

1. $Original: \frac{26}{52}$ $Reduced: \frac{1}{2}$ $Decimal: 0.500$ $Percent: 50.0\%$	2. $Original: \frac{26}{46}$ $Reduced: \frac{13}{23}$ $Decimal: 0.565$ $Percent: 56.5\%$	3. $Original: \frac{26}{52}$ $Reduced: \frac{1}{2}$ $Decimal: 0.500$ $Percent: 50.0\%$
4. $Original: \frac{8}{52}$ $Reduced: \frac{2}{13}$ $Decimal: 0.154$ $Percent: 15.4\%$	5. $Original: \frac{4}{40}$ $Reduced: \frac{1}{10}$ $Decimal: 0.100$ $Percent: 10.0\%$	6. $Original: \frac{52}{52}$ $Reduced: \frac{1}{1}$ $Decimal: 1.000$ $Percent: 100.0\%$
7. $Original: \frac{0}{52}$ $Reduced: \frac{0}{1}$ $Decimal: 0.000$ $Percent: 0.0\%$	8. $Original: \frac{1}{52}$ $Reduced: \frac{1}{52}$ $Decimal: 0.019$ $Percent: 1.9\%$	9. $Original: \frac{0}{48}$ $Reduced: \frac{0}{1}$ $Decimal: 0.000$ $Percent: 0.0\%$
10. $Original: \frac{20}{52}$ $Reduced: \frac{5}{13}$ $Decimal: 0.385$ $Percent: 38.5\%$	11. $Original: \frac{36}{52}$ $Reduced: \frac{9}{13}$ $Decimal: 0.692$ $Percent: 69.2\%$	12. $Original: \frac{19}{50}$ $Reduced: \frac{19}{50}$ $Decimal: 0.380$ $Percent: 38.0\%$