



Math worksheet on 'Probability Counting - Choose / Probability Counting - To Bracket Notation (Level 1)'.  
unit on 'Probability and Statistics - Permutations and Calculating - Practice'

Learn online:

[app.mobius.academy/math/units/probability\\_and\\_statistics\\_permutations\\_and\\_combi](http://app.mobius.academy/math/units/probability_and_statistics_permutations_and_combi)

**1** What's the chance of drawing two Queens from this set? Show as binomial coefficients (bracket notation).

9 ♣	3 ♥	6 ♦
Q ♥	Q ♣	Q ♦

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{3}{2}}{\binom{6}{2}}$	$\frac{\binom{4}{2}}{\binom{6}{2}}$	$\frac{\binom{5}{2}}{\binom{5}{4}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{2}{3}}{\binom{5}{4}}$	$\frac{\binom{3}{3}}{\binom{4}{2}}$	$\frac{\binom{3}{2}}{\binom{6}{2}}$

**2** What's the chance of drawing two Aces from this set? Show as binomial coefficients (bracket notation).

2 ♠	A ♣	A ♠
A ♦	A ♥	10 ♦

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{3}{2}}{\binom{5}{2}}$	$\frac{\binom{3}{2}}{\binom{4}{2}}$	$\frac{\binom{4}{2}}{\binom{6}{2}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{6}{2}}{\binom{7}{3}}$	$\frac{\binom{2}{4}}{\binom{8}{3}}$	$\frac{\binom{3}{3}}{\binom{2}{6}}$

**3** What's the chance of drawing two 8s from this set? Show as binomial coefficients (bracket notation).

8 ♠	8 ♦	8 ♣
6 ♠	10 ♥	

<b>a</b>	<b>b</b>
$\frac{\binom{2}{3}}{\binom{6}{2}}$	$\frac{\binom{5}{2}}{\binom{5}{5}}$
<b>c</b>	<b>d</b>
$\frac{\binom{2}{3}}{\binom{4}{4}}$	$\frac{\binom{5}{3}}{\binom{2}{5}}$
<b>e</b>	<b>f</b>
$\frac{\binom{2}{2}}{\binom{5}{2}}$	$\frac{\binom{2}{3}}{\binom{6}{2}}$

**4** What's the chance of drawing three 4s from this set? Show as binomial coefficients (bracket notation).

5 ♠	4 ♥	4 ♦
4 ♠	8 ♠	4 ♣

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{4}{3}}{\binom{6}{3}}$	$\frac{\binom{3}{4}}{\binom{4}{4}}$	$\frac{\binom{3}{3}}{\binom{7}{2}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{3}{2}}{\binom{5}{3}}$	$\frac{\binom{4}{2}}{\binom{4}{4}}$	$\frac{\binom{3}{3}}{\binom{8}{4}}$

**5** What's the chance of drawing three 8s from this set? Show as binomial coefficients (bracket notation).

6 ♠	8 ♣	2 ♠
8 ♦	8 ♠	8 ♥
J ♥		

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{4}{3}}{\binom{7}{3}}$	$\frac{\binom{3}{3}}{\binom{7}{7}}$	$\frac{\binom{4}{2}}{\binom{9}{2}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{5}{2}}{\binom{8}{4}}$	$\frac{\binom{6}{5}}{\binom{6}{3}}$	$\frac{\binom{3}{3}}{\binom{5}{4}}$

**6** What's the chance of drawing three 4s from this set? Show as binomial coefficients (bracket notation).

4 ♥	Q ♦	4 ♣
4 ♠	4 ♦	8 ♦

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{3}{3}}{\binom{5}{5}}$	$\frac{\binom{3}{3}}{\binom{8}{3}}$	$\frac{\binom{5}{3}}{\binom{8}{4}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{4}{3}}{\binom{6}{3}}$	$\frac{\binom{3}{2}}{\binom{3}{6}}$	$\frac{\binom{6}{2}}{\binom{8}{5}}$

**7** What's the chance of drawing two 10s from this set? Show as binomial coefficients (bracket notation).

J ♥	10 ♦	3 ♥
10 ♣	Q ♣	10 ♥

<b>a</b>	<b>b</b>	<b>c</b>
$\frac{\binom{5}{2}}{\binom{5}{4}}$	$\frac{\binom{2}{3}}{\binom{4}{3}}$	$\frac{\binom{5}{2}}{\binom{6}{2}}$
<b>d</b>	<b>e</b>	<b>f</b>
$\frac{\binom{3}{2}}{\binom{8}{2}}$	$\frac{\binom{3}{2}}{\binom{6}{2}}$	$\frac{\binom{3}{2}}{\binom{2}{6}}$