



Math worksheet on 'Probability Counting - Ways to Letters, 2 Repeats - to Equation (Level 1)'. Part of a unit on 'Probability and Statistics - Binomial Notation'

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**1** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

X	H	X
H		

<b>a</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 4 \cdot 3 \cdot 2}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2 \cdot 2}$	<b>d</b>	$\frac{3 \cdot 2}{2 \cdot 2}$
<b>e</b>	$\frac{4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 2}$	<b>f</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$

**2** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

G	P	P
G		

<b>a</b>	$\frac{4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 2}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$	<b>d</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$
<b>e</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2 \cdot 2}$	<b>f</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2}$

**3** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

P	P	U
U		

<b>a</b>	$\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2 \cdot 2}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2}$	<b>d</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$

**4** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

I	U	U
I		

<b>a</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 4 \cdot 3 \cdot 2}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2}$	<b>d</b>	$\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2}$
<b>e</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$	<b>f</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2 \cdot 2}$

**5** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

Q	I	I
Q		

<b>a</b>	$\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2 \cdot 2}$	<b>b</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 2 \cdot 2}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$	<b>d</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 2}$
<b>e</b>	$\frac{4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 2}$	<b>f</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$

**6** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

K	P	P
K		

<b>a</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 3 \cdot 2}$
<b>c</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 4 \cdot 3 \cdot 2}$	<b>d</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2}$
<b>e</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$	<b>f</b>	$\frac{4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 2}$

**7** How many distinct ways can these letter tiles be ordered? Show as a multiplication.

L	L	O
O		

<b>a</b>	$\frac{3 \cdot 2}{2 \cdot 2}$	<b>b</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 2}$
<b>c</b>	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2 \cdot 2}$	<b>d</b>	$\frac{4 \cdot 3 \cdot 2}{2 \cdot 3 \cdot 2}$
<b>e</b>	$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$		