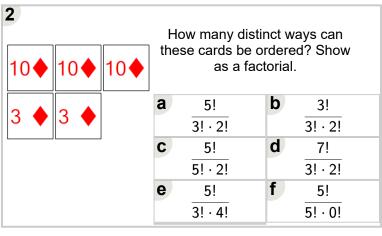# mobi

Math worksheet on *'Probability Counting - Ways to Cards, 2 Repeats - to Factorial Equation (Level 1)'*. broader unit on *'Probability and Statistics - Binomial Intro'*

Learn online:
app.mobius.academy/math/units/probability_and_statistics_probability_with_binomial

1

| J ♠ | Q ♥ | Q ♥ |
| Q ♥ | J ♠ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{5! \cdot 0!}$	**b**	$\dfrac{6!}{2! \cdot 3!}$
c	$\dfrac{5!}{3! \cdot 3!}$	**d**	$\dfrac{6!}{3! \cdot 2! \cdot 3!}$
e	$\dfrac{4!}{2! \cdot 3!}$	**f**	$\dfrac{5!}{2! \cdot 3!}$

2

| 10♦ | 10♦ | 10♦ |
| 3 ♦ | 3 ♦ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{3! \cdot 2!}$	**b**	$\dfrac{3!}{3! \cdot 2!}$
c	$\dfrac{5!}{5! \cdot 2!}$	**d**	$\dfrac{7!}{3! \cdot 2!}$
e	$\dfrac{5!}{3! \cdot 4!}$	**f**	$\dfrac{5!}{5! \cdot 0!}$

3

| 10♠ | J ♦ | 8 ♦ |
| J ♦ | 8 ♦ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{2! \cdot 2!}$	**b**	$\dfrac{3!}{2! \cdot 2!}$
c	$\dfrac{7!}{2! \cdot 2!}$	**d**	$\dfrac{5!}{5! \cdot 0!}$
e	$\dfrac{5!}{3! \cdot 2!}$	**f**	$\dfrac{6!}{2! \cdot 2!}$

4

| 3 ♣ | 8 ♠ | 8 ♠ |
| 3 ♣ | 3 ♣ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{3! \cdot 2!}$	**b**	$\dfrac{5!}{3! \cdot 4!}$
c	$\dfrac{5!}{5! \cdot 0!}$	**d**	$\dfrac{7!}{2! \cdot 3! \cdot 2!}$
e	$\dfrac{6!}{3! \cdot 2!}$		

5

| 10♦ | K ♣ | 10♦ |
| 10♦ | K ♣ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{2! \cdot 4!}$	**b**	$\dfrac{5!}{5! \cdot 0!}$
c	$\dfrac{5!}{2! \cdot 3!}$	**d**	$\dfrac{4!}{2! \cdot 3!}$
e	$\dfrac{5!}{2! \cdot 5!}$		

6

| 9 ♥ | 4 ♥ | 4 ♥ |
| 9 ♥ | 9 ♥ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{5!}{2! \cdot 4!}$	**b**	$\dfrac{7!}{2! \cdot 2! \cdot 3!}$
c	$\dfrac{5!}{2! \cdot 5!}$	**d**	$\dfrac{7!}{2! \cdot 3!}$
e	$\dfrac{5!}{2! \cdot 3!}$	**f**	$\dfrac{5!}{5! \cdot 0!}$

7

| 9 ♣ | J ♣ | J ♣ |
| 6 ♦ | 6 ♦ | |

How many distinct ways can these cards be ordered? Show as a factorial.

a	$\dfrac{3!}{2! \cdot 2!}$	**b**	$\dfrac{5!}{2! \cdot 2!}$
c	$\dfrac{5!}{5! \cdot 0!}$	**d**	$\dfrac{6!}{2! \cdot 2!}$
e	$\dfrac{5!}{2! \cdot 3!}$	**f**	$\dfrac{5!}{3! \cdot 2!}$