



Probability Linear or Circular Permutation - Scenario to Value

1

7 friends ride in the identical cars of a Ferris wheel arranged in a circle. How many distinct arrangements are possible if rotations of the wheel count as the same?

How many distinct arrangements are possible in this scenario?

A	720	B	120
C	40320	D	5040

2

7 campers stand evenly spaced in a circle around a campfire. How many distinct arrangements are possible if arrangements that are rotations of each other count as the same?

How many distinct arrangements are possible in this scenario?

A	360	B	1440
C	5040	D	720

3

Ranked prizes (1st, 2nd, 3rd, and so on) are awarded to 6 contestants in a competition, one prize each. How many ways can the prizes be awarded?

How many distinct arrangements are possible in this scenario?

A	360	B	720
C	24	D	120

4

7 ornaments are hung at equally spaced positions around a circular wreath. How many distinct arrangements are possible if rotations of the wreath count as the same?

How many distinct arrangements are possible in this scenario?

A	40320	B	720
C	120	D	1440

5

5 runners are each assigned to a different numbered lane in a sprint race. How many ways can the lanes be filled?

How many distinct arrangements are possible in this scenario?

A	6	B	240
C	120	D	24

6

6 runners are each assigned to a different numbered lane in a sprint race. How many ways can the lanes be filled?

How many distinct arrangements are possible in this scenario?

A	720	B	360
C	1440	D	120

7

Ranked prizes (1st, 2nd, 3rd, and so on) are awarded to 4 contestants in a competition, one prize each. How many ways can the prizes be awarded?

How many distinct arrangements are possible in this scenario?

A	12	B	6
C	120	D	24

8

4 runners are assigned to equally spaced positions around a circular track. How many distinct arrangements are possible if rotations count as the same?

How many distinct arrangements are possible in this scenario?

A	12	B	2
C	6	D	3