

HKDSE Problems

1. A drama club is formed by 12 boys and 8 girls. If a team of 5 students is selected from the club to participate in a competition and the team consists of at least one girl, how many different teams can be formed?
- A. 3 960
B. 14 712
C. 15 448
D. 15 504
- [2012-DSE-MATHS 2-43]
2. If the first three digits and the last five digits of an eight-digit phone number are formed by a permutation of 5, 6, 9 and a permutation of 2, 3, 4, 7, 8 respectively, how many different eight-digit phone numbers can be formed?
- A. 15
B. 126
C. 720
D. 40 320
- [2013-DSE-MATHS 2-44]
3. There are 13 boys and 17 girls in a class. If a team of 2 boys and 3 girls is selected from the class to participate in a voluntary service, how many different teams can be formed?
- A. 38 896
B. 53 040
C. 142 506
D. 636 480
- [2014-DSE-MATHS 2-43]
4. A queue is formed by 6 boys and 2 girls. If no girls are next to each other, how many different queues can be formed?
- A. 1 440
B. 10 080
C. 30 240
D. 35 280
- [2015-DSE-MATHS 2-43]
5. There are 20 boys and 15 girls in a class. If 6 students are selected from the class to form a committee consisting of at most 2 girls, how many different committees can be formed?
- A. 271 320
B. 324 415
C. 508 725
D. 780 045
- [2016-DSE-MATHS 2-43]
6. There are 13 students and 6 teachers in a committee. If 5 students and 4 teachers are selected from the committee to form a team, how many different teams can be formed?
- A. 4 290
B. 19 305
C. 92 378
D. 55 598 400
- [2017-DSE-MATHS 2-42]
7. In a class, there are 14 boys and 15 girls. If 3 students of the same gender are selected from the class to form a team, how many different teams can be formed?
- A. 819
B. 3 654
C. 4 914
D. 165 620
- [2018-DSE-MATHS 2-42]
8. A queue is formed by 6 boys and 5 girls. If no boys are next to each other, how many different queues can be formed?
- A. 86 400
B. 172 800
C. 213 444
D. 39 916 800
- [2020-DSE-MATHS 2-42]