

1. Each student at Provincial University has a student I.D. number consisting of 7 digits (the first digit is nonzero, and digits can be repeated) followed by two of the letters A, B, C and D (letters cannot be repeated). How many different student numbers are possible?
- a. 6,480
 - b. 729
 - c. 108,000,000
 - d. 144,000,000
2. Find the value of $\frac{32!}{27!}$.
- a. 863,040
 - b. 150
 - c. 652,458,240
 - d. 24,165,120
3. Gustav goes to a party and insists on occupying a rocking chair. If there are 4 rocking chairs and 8 people at the party (including Gustav), how many seating arrangements are possible?
- a. 20,160 arrangements
 - b. 4 arrangements
 - c. 32 arrangements
 - d. 5,040 arrangements

4. Find the value of $\frac{8!}{4!}$

- a. 336
- b. 70
- c. 1,680
- d. 6,720

5. Find the value of $\frac{12!}{7!}$.

- a. 792
- b. 11,880
- c. 95,040
- d. 1,320

6. Evaluate $C(8,3)$.

- a. 56
- b. 9.333333
- c. 336
- d. 14

7. Amy and Jody are partners in a law firm. How many committees of 4 containing Amy or Jody can be formed if there are 7 partners in total?

- a. 60 possible committees
- b. 6.666667 possible committees
- c. 10 possible committees
- d. 20 possible committees

8. Wayne allows Marcel to take three hockey cards at random from his collection of 151 different cards in exchange for a Gaston Gingras rookie card. How many different sets of three cards can be selected by Marcel?
- a. 3,374,850
 - b. 325.833333
 - c. 562,475
 - d. 1,124,950
9. A 6/42 lottery requires choosing six of the numbers 1 through 42. Repeat numbers are not allowed. How many different lottery tickets can you choose?
- a. 141,778
 - b. 10,491,572
 - c. 5,245,786
 - d. 188,848,296
10. A jar is filled with 48 green jelly beans and 49 red jelly beans. What is the probability of picking a red jelly bean?
- a. $P = 0.505155$
 - b. $P = 0.55567$
 - c. $P = 0.337931$
 - d. $P = 0.494845$

11. A jar is filled with 39 green jelly beans and 24 red jelly beans. If two jelly beans are taken from the jar, what is the probability that they will both be green?
- a. $P = 0.235294$
 - b. $P = 0.141321$
 - c. $P = 0.419048$
 - d. $P = 0.379416$
12. A jar is filled with 11 green marbles, 17 yellow marbles and 28 red marbles. If three marbles are taken from the jar what is the probability of taking at least two red marbles?
- a. $P = 0.358974$
 - b. $P = 0.5$
 - c. $P = 0.56$
 - d. $P = 0.245455$
13. Calculate the probability of being dealt given poker hand (Recall that a poker player is dealt five cards at random from a standard desk of 52): 3 cards of the same suit, but 2 cards of the another same suit.
- Choose the answer from the following :
- a. 0.6439
 - b. 0.0858
 - c. 0.1030

ANSWER KEY

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1. c: 108,000,000
2. d: 24,165,120
3. a: 20,160 arrangements
4. c: 1,680
5. c: 95,040
6. a: 56
7. d: 20 possible committees
8. c: 562,475
9. c: 5,245,786
10. a: $P = 0.505155$
11. d: $P = 0.379416$
12. b: $P = 0.5$
13. c: 0.1030