

Subject 2
Probability

Please, do not write on the exam paper.

1. Which of the following is the sample space when 2 coins are tossed? (H=head T=Tail)
a) {H, T, H, T} b) {H, T} c) {HH, HT, TH, TT} d) None of the above.
2. A pair of dice is rolled. What is the probability of getting a sum of 2?
a) $\frac{1}{18}$ b) $\frac{1}{36}$ c) $\frac{1}{3}$ d) None of the above.
3. In a class of 30 students, there are 17 girls and 13 boys. Five are students in chemistry, and three of these students are girls. If a student is chosen at random, what is the probability of choosing a girl or a student in chemistry?
a) $\frac{19}{30}$ b) $\frac{11}{15}$ c) $\frac{17}{180}$ d) None of the above.
4. In the United States, 43% of people use a seat belt while driving. If two people are chosen at random, what is the probability that both of them use a seat belt?
a) 86% b) 18% c) 57% d) None of the above.
5. Three cards are chosen at random from a deck (of 52 cards) without replacement. What is the probability of getting a jack, a ten and a nine?
a) $\frac{8}{16575}$ b) $\frac{1}{2197}$ c) $\frac{6}{35152}$ d) None of the above.
6. According to a city survey, 47% of teenagers have a part time job. The same survey states that 78% of teenagers plan to attend college. If a teenager is chosen at random, what is the probability that the teenager has a part time job and plans to attend college?
a) 60% b) 63% c) 37% d) None of the above.

Optionnal questions:

If the subject is easy for you and if you still have time to do it, continue with these optional questions.:

7. In a school, 14% of students attend drama and computer classes, and 67% attend drama class. What is the probability that a student attends computer class given that the student attends drama class?
a) 81% b) 21% c) 53% d) None of the above.
8. In a shipment of 100 TV sets, 6 are defective. If a person buys two TV sets from that shipment, what is the probability that both are defective?
a) $\frac{3}{100}$ b) $\frac{9}{2500}$ c) $\frac{1}{330}$ d) None of the above.