

7. In a statistics class there are 18 juniors and 10 seniors; 6 of the seniors are females and 12 of the juniors are males. If a student is selected at random, find the probability of selecting the following:
- $P(\text{a junior or a female})$
 - $P(\text{a senior or a female})$
 - $P(\text{a junior or a senior})$
8. In a bag of marbles there are 5 green, 6 red, and 4 yellow.
- What is the probability of pulling a red marble and then pulling a yellow marble with replacement?
 - What is the probability of pulling a green marble and then a yellow with replacement?
 - What is the probability of pulling a red marble and then a green without replacement?
 - What is the probability of pulling a yellow and then a red without replacement?
9. Given a deck of cards
- What is the probability of drawing a diamond and then a 4 with replacement?
 - What is the probability of drawing a 5 and then drawing a 7 with replacement?
 - What is the probability of drawing a king of hearts and then drawing a heart without replacement?
 - What is the probability of drawing a jack and then a club without replacement?
10. Andrea is a very good student. The probability that she studies and passes her mathematics test is $\frac{17}{20}$. If the probability that Andrea studies is $\frac{15}{16}$, find the probability that Andrea passes her mathematics test, given that she has studied.
11. The probability that Janice smokes is $\frac{3}{10}$. The probability that she Smokes and develops lung cancer is $\frac{4}{15}$. Find the probability that Janice develops lung cancer, given that she smokes.
12. The probability that Sue will go to Mexico in the winter and to France in the summer is 0.40. The probability that she will go to Mexico in the winter is 0.60. Find the probability that she will go to France this summer, given that she just returned from her winter vacation in Mexico.