

Use the following information to answer the following questions. The table shows the favorite subjects of those in the sophomore class.

Subject	English	Social Studies	Science	Math	World Language	Physical Education	No Preference
Number	35	60	40	45	25	20	30

How many total sophomores were surveyed?

What is the probability that a student said Science?

What is the probability that a student said Math or Physical Education?

What is the probability that a student did not say English?

In the word supercalifragilisticexpialidocious, what is the probability of choosing an i?

Using the fact that there are a total of 36 possible combinations of rolling two dice, answer the following questions.

What is the probability of rolling 2 dice and getting a product less than 8?

What is the probability of rolling 2 dice and getting a sum greater than 9?

What is the probability of rolling 2 dice twice and getting a 8 on the first roll and 10 on the second roll?

What is the probability of rolling 2 dice twice and getting doubles on the first roll and 7 on the second roll?

Find each probability assuming you are drawing one card, **replacing it**, and then drawing another card.

What is the probability of drawing a spade on the first draw and a face card on the second draw?

What is the probability of drawing a 10 on the first draw and a red card on the second draw?

What is the probability of drawing a non-face card on the first draw and an ace on the second draw?

Find each probability assuming you are drawing one card, **not replacing it**, and then drawing another card.

What is the probability of drawing a black jack on the first draw and a face card on the second draw?

What is the probability of drawing a heart on the first draw and a red card on the second draw?

What is the probability of drawing a club on the first card and a red face card on the second draw?

The data from a survey of 50 students is shown in the table. The students were asked whether or not they were taking a foreign language and whether or not they played a sport.

	Play a Sport	Not Play a Sport	Total
Foreign Language	14	23	37
Not Foreign Language	10	3	13
Total	24	26	50

$P(\text{Play a Sport})$

$P(\text{Not taking Foreign Language})$

$P(\text{Not playing a Sport and Foreign Language})$

$P(\text{Playing a Sport or Foreign Language})$

$P(\text{Not Foreign Language} | \text{Playing a Sport})$

Are not playing a sport and not taking a foreign language mutually exclusive?
Explain your answer.

Are playing a sport and not taking a foreign language independent? Justify your reasoning.

85% of the world will watch the Super Bowl. What is the probability that Mr. Yost will watch the Super Bowl, Billie Eilish will not watch the Super Bowl, and Hugh Jackman will watch the Super Bowl.

Sasha works for a garden center. On any given week the probability of Sasha working outdoors is 70%. The probability that she works during the weekend is 20%. What is the probability that Sasha will have to work outside and work on the weekend? (Use a tree Diagram)