

Some cars in a parking lot have the following license plate identifications.

5HEX32

4EAE32

8TAS12

2AAU62

4JSA48

6JBL62

One of the license plates is chosen at random. Consider the following events.

V : All the letters of the chosen license plate are vowels.

E : All the digits of the chosen license plate are even integers.

How many outcomes are in the event V and E ?

a. 1

b. 2

c. 3

d. 4

If you missed #1, do this

Ines is playing a card game with a standard 52-card deck. She wants her first draw to be a heart or a face card. What is the probability that she draws a heart or a face card on her first draw?

a. $\frac{3}{52}$

b. $\frac{4}{13}$

c. $\frac{11}{26}$

d. $\frac{25}{52}$

If you missed #5, do this

West End High School has 640 students. All the students responded to a survey about what sights they have visited in Washington, D.C. Some of the results are as follows.

180 students have visited the National Zoo.

120 students have visited Capitol Hill.

220 students have visited the National Zoo or Capitol Hill.

Based on the survey, what is the probability that a randomly chosen student at West End High School has visited both the National Zoo and Capitol Hill?

a. $\frac{1}{16}$

b. $\frac{1}{8}$

c. $\frac{5}{32}$

d. $\frac{15}{32}$

If you missed #4, do this

The table below shows data about 108 pizzas sold in a pizzeria. Each pizza was sold with one topping.

Pizza shape	Pizza topping			
	Pepperoni	Mushroom	Onion	Chicken
Round	20	10	15	15
Square	16	8	18	6

Consider the following events.

R : A round pizza is sold.

S : A square pizza is sold.

P : A pepperoni pizza is sold.

O : An onion pizza is sold.

C : A chicken pizza is sold.

Which pair of events is independent?

a. S and C

b. R and O

c. S and O

d. none of these

If you missed #10, do this.

A sports club for girls has 80 members. Each member is currently involved in one activity, as shown in the table.

Grade	Activity		
	Volleyball	Basketball	Cheerleading
10	8	8	8
11	6	12	12
12	2	12	12

If you missed #3, do this.

The following probabilities apply to a randomly chosen member of the club. Which probability is the greatest?

a. the probability that the girl is in the tenth grade

b. the probability that the girl is in the tenth grade, given that she is in volleyball

c. the probability that the girl is in the twelfth grade

d. the probability that the girl is in the twelfth grade, given that she is in basketball

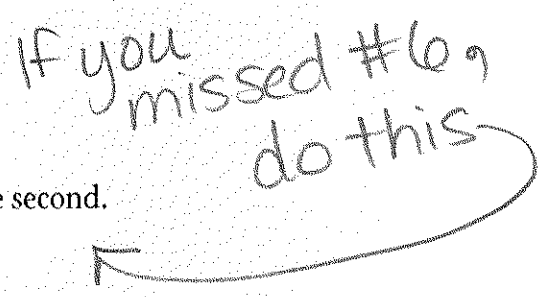
Arturo has a bag that contains 10 tiles: 3 are red, 2 are white, and 5 are blue. He takes a tile from the bag without looking. He does not replace it. Then he takes another tile from the bag without looking. Consider the following events.

RF : Arturo takes a red tile first.

BS : Arturo takes a blue tile second.

RF and BS : Arturo takes a red tile first and a blue tile second.

If you missed #6, do this



Which option describes the events?

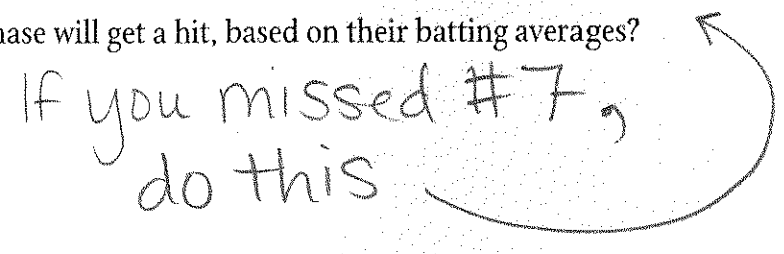
- a. The events RF and BS are dependent, and the probability of the event RF and BS is $\frac{1}{6}$.
- b. The events RF and BS are dependent, and the probability of the event RF and BS is $\frac{3}{20}$.
- c. The events RF and BS are independent, and the probability of the event RF and BS is $\frac{1}{6}$.
- d. The events RF and BS are independent, and the probability of the event RF and BS is $\frac{3}{20}$.

The expression for calculating a baseball player's batting average is $\frac{\text{number of hits}}{\text{number of times at bat}}$.

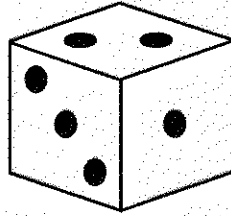
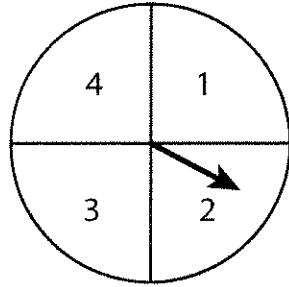
Larry's batting average is 0.250, and he is at bat. Chase's batting average is 0.300, and he will be at bat after Larry. Assume that each player's performance is independent of the other's. What is the probability that Larry or Chase will get a hit, based on their batting averages?

- a. 0.275
- b. 0.300
- c. 0.475
- d. 0.550

If you missed #7, do this



Solange spins a spinner with equal sections 1–4 and then rolls a standard 6-sided number cube. What is the probability that the sum of the spinner and number cube results is even if the product is even?



If you missed #8, do this

- a. $\frac{1}{3}$
- b. $\frac{1}{2}$

- c. $\frac{3}{4}$
- d. 1

Which of the following has the greatest probability if Caleb tosses a coin 3 times?

- a. He gets exactly 2 heads.
- b. He gets exactly 2 heads, given that the first toss is heads.
- c. The first toss is heads, given that he gets exactly 2 heads.
- d. The first toss is heads, given that he gets at least 2 heads.

If you missed #2, do this

A faculty advisor at Ridge High School surveyed 100 students about their preference for a social event. Of the 100 students surveyed, 50 were tenth graders and 50 were eleventh graders. Of the tenth graders, 30 chose a bowling party and 20 chose a dance. Of the eleventh graders, 20 chose a bowling party and 30 chose a dance.

Consider the following events that apply to a random student in the survey sample.

TEN : The student is a tenth grader.

B : The student prefers a bowling party.

Which statement is true about events TEN and B ?

- a. Events TEN and B are dependent and $P(TEN|B) < P(B|TEN)$.
- b. Events TEN and B are dependent and $P(TEN|B) = P(B|TEN)$.
- c. Events TEN and B are independent and $P(TEN|B) < P(B|TEN)$.
- d. Events TEN and B are independent and $P(TEN|B) = P(B|TEN)$.

continued

If you missed #9, do this

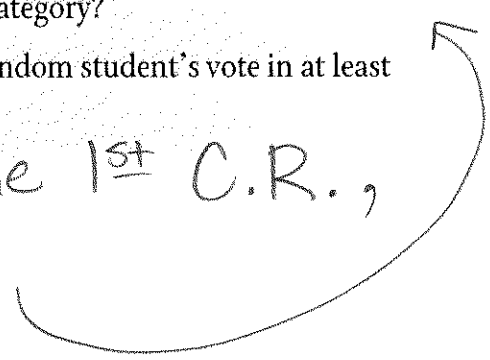
The students at Jessica's school voted for Student Council president, Student Council vice president, school mascot, and school colors. The table shows how Jessica voted in each category. It also shows the percent of all the students' votes that matched Jessica's vote in each category. For example, Jessica voted for Lucas for Student Council president, and 35% of all the students voted for Lucas.

		Jessica's vote	Percent of all votes that matched Jessica's vote
Student Council officers	Student Council president	Lucas	35%
	Student Council vice president	Hernandez	40%
School spirit	School mascot	Wolf	60%
	School colors	Blue and yellow	25%

Suppose that a student at the school other than Jessica is chosen at random. Jessica wants to know the probability that her vote matches the randomly chosen student's vote in at least one category. Complete parts a–f to find the probability Jessica wants to know and round your answers to the nearest percent. (Assume that matching votes in any one category have no effect on the probability of matching votes in any other category.)

- What is the probability that Jessica's vote matches the random student's vote for Student Council president or Student Council vice president?
- What is the probability that Jessica's vote matches the random student's vote for at least one Student Council officer?
- What is the probability that Jessica's vote matches the random student's vote for school mascot or school colors?
- What is the probability that Jessica's vote matches the random student's vote for at least one school spirit category?
- What is the probability that Jessica's vote matches the random student's vote for at least one Student Council officer or at least one school spirit category?
- What is the probability that Jessica's vote matches the random student's vote in at least one category?

If you missed the 1st C.R.,
do this



Jamil is a political science major. As part of an assignment, he collected data about how the citizens in three towns voted in an election for a county sheriff. The table below shows the data.

Town	Candidate		Total
	Blake	Valdez	
Greenville	645	890	1,535
Clinton	520	1,610	2,130
Springdale	950	1,242	2,192
Total	2,115	3,742	5,857

The following probabilities apply to a randomly chosen voter in the sample. Which probability is the greatest?

- the probability that the voter lives in Springdale
- the probability that the voter voted for Blake
- the probability that the voter lives in Springdale, given that she or he voted for Blake
- the probability that the voter voted for Blake, given that she or he lives in Springdale

A school librarian surveyed 300 students. He listed three novels and three movies, and asked the students to choose one from each category as their favorite. The table below shows the survey results.

Favorite novel	Favorite movie			Total
	<i>Nine Dogs</i>	<i>Henry Porter</i>	<i>Summerwater</i>	
<i>The Hidden Gnome</i>	25	70	25	120
<i>Mosquito Nights</i>	22	22	31	75
<i>Tomato</i>	33	28	44	105
Total	80	120	100	300

Consider the following events, which apply to a randomly chosen student in the survey sample.

HG : The student chose *The Hidden Gnome* as his or her favorite novel.

S : The student chose *Summerwater* as his or her favorite movie.

Which statement is true about events HG and S ?

- Events HG and S are dependent and $P(HG|S) < P(S|HG)$.
- Events HG and S are dependent and $P(HG|S) > P(S|HG)$.
- Events HG and S are independent and $P(HG|S) < P(S|HG)$.
- Events HG and S are independent and $P(HG|S) > P(S|HG)$.

If you missed the 2nd C.R. do both of these