

Name:

Partners:

Statistics

Date:

Review 4 Version A

[A] Circle whether each statement is true or false.

T F 1. $G \cap \emptyset = G$

T F 2. $$.25 = .25¢$

T F 3. $(A \cup B)' = A' \cap B'$

T F 4. "Odd" and "less than 4" are mutually exclusive.

T F 5. If drawing a heart will win \$2, the expected value is 50¢.

T F 6. The probability of a card being red given it is hearts is 50%.

T F 7. The sample space for flipping two coins is HH, HT, TH, and TT.

T F 8. Part [D] involves independent events, and part [E] involves dependent events.

T F 9. The complement of "all of the cards are spades" is "none of the cards are spades."

[B] Jared pays \$10 to roll 2 six-sided dice.

1. If the first die rolls a 1, he wins \$30. If both dice roll a 6, he wins \$100. Calculate his expected value.

[C] State the size of the sample space for each of the following situations.

1. Out of four dice, three roll a 1.

2. The digits of the number 122122 are written in random order.

3. Tanner splits his 12 employees into a group of 4 for the day shift, and a group of 4 for the night shift, and a group of 4 for the swing shift.

[D] Sarah rolls four 4-sided dice, making a prediction for each. Calculate the probability of each of the following without reducing or using decimals or percents.

1. Exactly three of her predictions are correct.
2. At least one of her predictions is correct.

3. At least three of her predictions are correct.

[E] Emma's playlist consists of 40 rock songs, 20 country songs, and 10 rap songs. 12 of the the rock songs, 9 of the country songs, and 3 of the rap songs are done by female artists. Calculate the following probabilities, given the songs play in random order. Do not reduce or use decimals or percents.

1. The last song is country.
2. The first song is rock or by a female artist.

3. The first song is by a female artist, given it is rock.
4. The first two artists are not the same sex.

5. At least one of the first two songs is rap.
6. Exactly one of the first two songs is country.

[F] Do the following to organize your group's reviews.

1. Make sure your name and your partners' names are at the top of your review the first day.
2. Staple the reviews in order, all facing the same way. Put the staple in the very top left corner if everyone is finished or if the review is due; otherwise put the staple in the top right corner.

Name:

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Review 4 Version B

[A] Circle whether each statement is true or false.

T F 1. $G \cap \emptyset = G$

T F 2. $$.25 = .25¢$

T F 3. $(A \cup B)' = A' \cap B'$

T F 4. "Odd" and "less than 4" are mutually exclusive.

T F 5. If drawing a heart will win \$2, the expected value is 50¢.

T F 6. The probability of a card being red given it is hearts is 50%.

T F 7. The sample space for flipping two coins is HH, HT, TH, and TT.

T F 8. Part [D] involves independent events, and part [E] involves dependent events.

T F 9. The complement of "all of the cards are spades" is "none of the cards are spades."

[B] Jared pays \$10 to roll 3 six-sided dice.

1. If the first die rolls a 1, he wins \$30. If all three dice roll a 6, he wins \$100. Calculate his expected value.

[C] State the size of the sample space for each of the following situations.

1. Out of five dice, three roll a 1.

2. The digits of the number 1122112211 are written in random order.

3. Tanner splits his 12 employees into a group of 4 for the day shift, and a group of 4 for the night shift, and a group of 4 for the swing shift, and he chooses a captain for each shift.

[D] Sarah rolls five 4-sided dice, making a prediction for each. Calculate the probability of each of the following without reducing or using decimals or percents.

1. Exactly three of her predictions are correct.
2. At least one of her predictions is correct.

3. At least three of her predictions are correct.

[E] Emma's playlist consists of 40 rock songs, 20 country songs, and 10 rap songs. 12 of the the rock songs, 9 of the country songs, and 3 of the rap songs are done by female artists. Calculate the following probabilities, given the songs play in random order. Do not reduce or use decimals or percents.

1. The second song is country.
2. The first song is country or by a female artist.

3. The first song is by a male artist, given it is rock.
4. The first two artists are the same sex.

5. At least one of the first three songs is rap.
6. Exactly one of the first three songs is country.

[F] Bonus.

1. Sheena is dealt five cards. Calculate the probability of each of the following.

a) a flush

b) a royal flush

Name:

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Review 4 Version C

[A] Circle whether each statement is true or false.

T F 1. $G \cap \emptyset = G$

T F 2. $$.25 = .25¢$

T F 3. $(A \cup B)' = A' \cap B'$

T F 4. "Odd" and "less than 4" are mutually exclusive.

T F 5. If drawing a heart will win \$2, the expected value is 50¢.

T F 6. The probability of a card being red given it is hearts is 50%.

T F 7. The sample space for flipping two coins is HH, HT, TH, and TT.

T F 8. Part [D] involves independent events, and part [E] involves dependent events.

T F 9. The complement of "all of the cards are spades" is "none of the cards are spades."

[B] Jared pays \$10 to roll 2 six-sided dice.

1. If the first die rolls a 1, he wins \$10 times the roll of the second die. If both dice roll a 6, he wins \$100. Calculate his expected value.

[C] State the size of the sample space for each of the following situations.

1. Out of seven dice, three roll a 1.

2. The digits of the number 71122112211 are written in random order.

3. Tanner splits his 12 employees into a group of 4 for the day shift, and a group of 4 for the night shift, and a group of 4 for the swing shift, and he chooses a captain and a manager for each shift.

[D] Sarah rolls seven 4-sided dice, making a prediction for each. Calculate the probability of each of the following without reducing or using decimals or percents.

1. Exactly three of her predictions are correct.
2. At least one of her predictions is correct.
3. At least three of her predictions are correct.

[E] Emma's playlist consists of 40 rock songs, 20 country songs, and 10 rap songs. 12 of the the rock songs, 9 of the country songs, and 3 of the rap songs are done by female artists. Calculate the following probabilities, given the songs play in random order. Do not reduce or use decimals or percents.

1. The third song is country.
2. The first song is rock or country or a female artist.
3. The first song is rap, given it is by a male artist.
4. The first two songs are the same genre.
5. At least one of the first three songs is not rap.
6. Exactly two of the first four songs are country.

[F] Bonus.

1. Sheena is dealt five cards. Calculate the probability of each of the following.
 - a) no pairs
 - b) four of a kind

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Review 4 Version D

[A] Circle whether each statement is true or false.

T F 1. $G \cap \emptyset = G$

T F 2. $$.25 = .25¢$

T F 3. $(A \cup B)' = A' \cap B'$

T F 4. "Odd" and "less than 4" are mutually exclusive.

T F 5. If drawing a heart will win \$2, the expected value is 50¢.

T F 6. The probability of a card being red given it is hearts is 50%.

T F 7. The sample space for flipping two coins is HH, HT, TH, and TT.

T F 8. Part [D] involves independent events, and part [E] involves dependent events.

T F 9. The complement of "all of the cards are spades" is "none of the cards are spades."

[B] Jared pays \$10 to roll 2 six-sided dice.

1. If one of the dice rolls a 1, he wins \$10 times the roll of the other die. If both dice roll a 6, he wins \$100. Calculate his expected value.

[C] State the size of the sample space for each of the following situations.

1. Out of ten dice, three roll a 1.

2. The digits of the number 71122112211 are written in random order, and each digit is black or red.

3. Tanner splits his 12 employees into 3 groups of 4. (This is different than on Version A.)

[D] Sarah rolls ten 4-sided dice, making a prediction for each. Calculate the probability of each of the following without reducing or using decimals or percents.

1. Exactly three of her predictions are correct.
2. At least one of her predictions is correct.

3. At least three of her predictions are correct.

[E] Emma's playlist consists of 40 rock songs, 20 country songs, and 10 rap songs. 12 of the the rock songs, 9 of the country songs, and 3 of the rap songs are done by female artists. Calculate the following probabilities, given the songs play in random order. Do not reduce or use decimals or percents.

1. The seventh song is country.
2. The first song is by a male artist or is not rock.

3. The first song is not rap, given it is by a male artist.
4. The first two songs are not the same genre.

5. At least two of the first three songs are rap.
6. The first four songs include all three genres.

[F] Bonus.

1. Sheena is dealt five cards. Calculate the probability of each of the following.
 - a) a straight
 - b) a straight flush