Week 3 Practice Quiz

3/3 points (100.00%)

Practice Quiz, 3 questions

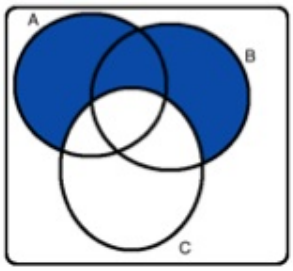
✔ Congratulations! You passed!

Next Item

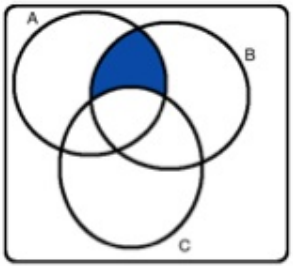
✔ 1 / 1 points

1.
Shown below are four Venn diagrams. In which of the diagrams does the shaded area represent A and B and C?

I.



II.

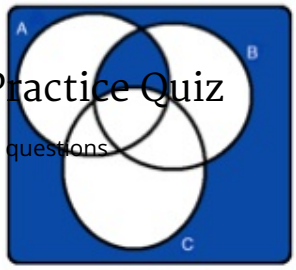


III.

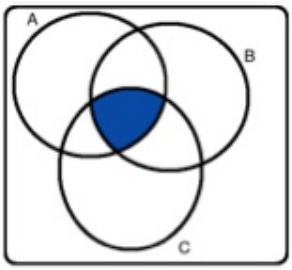
Week 3 Practice Quiz

Practice Quiz, 3 questions

3/3 points (100.00%)



- [x] Iv.



Correct

This question refers to the following learning objective: Draw Venn diagrams representing events and their probabilities.

We need the area shared by all events, the intersection of all three circles: “A and B and C”.

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1 / 1 points

2.

Which of the following is **false** about probability distributions?

- [ ] Each probability should be greater than or equal to 0.
- [ ] Each probability should be positive, less than or equal to 1.
- [x] The outcomes listed must be independent.

Correct

This question refers to the following learning objective: Define a probability distribution as a list of the possible outcomes with corresponding probabilities that satisfies three rules:

- The outcomes listed must be disjoint.
- Each probability must be between 0 and 1.

- The probabilities must total 1.

Week 3 Practice Quiz

- There is no such restriction that we must only list independent outcomes.

3/3 points (100.00%)

Practice Quiz, 3 questions

The probabilities must total 1.

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1 / 1 points

3.

Last semester, out of 170 students taking a particular statistics class, 71 students were “majoring” in social sciences and 53 students were majoring in pre-medical studies. There were 6 students who were majoring in both pre-medical studies and social sciences. What is the probability that a randomly chosen student is majoring in social sciences, given that s/he is majoring in pre-medical studies?

6/71

(71+53−6)/170

6/53

Correct

This question refers to the following learning objective: Distinguish marginal and conditional probabilities.

If M is the event a student is majoring in pre-medical studies and S is the event s/he is majoring in social sciences, then calculate $P(S|M) = \frac{P(S\&M)}{P(M)} = \frac{6}{53}$.

6/170
