Online Quiz Probability
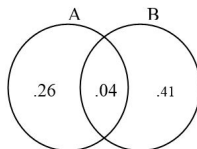
This test/quiz is accepting submissions until Wednesday, April 18, 2018 at 8:59 pm

Question 1 (10 points)

At Mathis Cool High, the two primary school activities student participate in are student council and math club. The Venn below details the proportion of students involved in each activity.

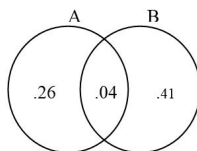

A = involved in student council

B = involved in math club

Given the diagram, what is the probability that a student selected at random will participate in student council or in math club?

- ◉ a   .71
- ○ b   .04
- ○ c   .67
- ○ d   .29
- ○ e   .26

Question 2 (10 points)

At Mathis Cool High, the two primary school activities student participate in are student council and math club. The Venn below details the proportion of students involved in each activity.

A = involved in student council

B = involved in math club

What is the probability that a randomly selected student participates in both clubs given the person participates in math club?
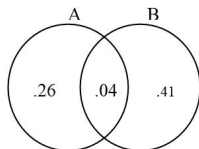
- ○ a   none of these
- ○ b   .0889
- ○ c   .1333
- ◉ d   .0976
- ○ e   .1538

Question 3 (10 points)

At Mathis Cool High, the two primary school activities student participate in are student council and math club. The Venn below details the proportion of students involved in each activity.

Time left for this assessment:

9:03

A   B

.26   .04   .41

A = involved in student council

B = involved in math club

Given the diagram, what is the probability that a student selected at random will not participate in either activity?

- ○ a   .29
- ○ b   .71
- ○ c   .04
- ○ d   .41
- ○ e   .26

Question 4 (10 points)

For a large sample size, which of the following populations will have a sampling distribution closest to a normal distribution?

- ○ a   strongly skewed right
- ○ b   all will be approximately normal
- ● c   normal
- ○ d   slightly skewed left
- ○ e   uniform

Question 5 (10 points)

At Mathis Cool High, the two primary school activities student participate in are student council and math club. The Venn below details the proportion of students involved in each activity.

A   B

.26   .04   .41
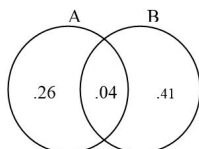
A = involved in student council

B = involved in math club

If four consecutive students selected at random, what are the chances at least one will participate in both clubs?

- ● a   .15
- ○ b   .00001
- ○ c   .999997
- ○ d   .85
- ○ e   .000003

Question 6 (10 points)

In the fall of 2000, 54% of the almost 34,000 first-year students attending one of the California State Universities had strong enough math skills to take an entry level course. What value will we use for the standard deviation of the sampling proportion of a random sample of 100 students.

- ○ a   not enough information
- ○ b   .0124
- ● c   .0498
- ○ d   .0025

e   .1114

Question 7 (10 points)

Which of the following is a continuous random variable?

- a   The shoe size of a randomly selected customers at Karavel Shoes.
- b   The number of people who buy a used car on a Friday.
- c   The weight of paper recycled from McCallum High School.
- d   none of the above
- e   The favorite flavor of ice cream at the Amy's on Burnet Road.

Question 8 (10 points)

The sampling distribution of a statistic is

- a   The probability that we obtain the statistic in repeated random samples.
- b   The graphical display that determines whether randomization was effective.
- c   None of the above.
- d   The distribution of values based on z-scores in which a variety of sample sizes are displayed.
- e   The distribution of values taken by a statistic in all possible samples of the same sample size from the same population.

Question 9 (10 points)

A company with 16 employees gives everyone a $2000 bonus. What will be the change in the standard deviation of the employees' income after the bonus is awarded?

- a   It will increase by $\$\sqrt{2000}$
- b   It will be multiplied by $2000.
- c   It will increase by $500.
- d   It will also increase by $2000.
- e   It will stay the same.

Question 10 (10 points)

Suppose that in a certain part of the world, in any 50-year period the probability of a plague is 0.39, the probability of famine is 0.52, and the probability of both a plague and a famine is 0.15. What is the probability of a famine given that there is a plague?

- a   0.240
- b   .760
- c   0.288
- d   .370
- e   .385

Submit

Saved at 4:07 pm

Time left for this assessment:
9:03