

Quantitative Skills & Reasoning - Math 1001

Dr. Bob Brown, Jr.
Dean Emeritus
Professor Emeritus
East Georgia State College
Zoom Video Broadcast 11-5-2019



Agenda

1. Test 4 Summary Results
2. Work Test 4
3. Plans for Final Exam
4. Practice Final Overview

Class Grades

Mean: 76.4% Test #1

5-number summary: n = 31

17, 64, 80, 98, 100

17%, 64%, 80%, 98%, 100%

Mean: 61% Test #3

5-number summary: n = 27

0, 47, 65, 85, 99

0%, 47%, 65%, 85%, 99%

Mean: 79.1% Test #2

5-number summary: n = 30

0, 71.4, 82.95, 88.8, 100

0%, 71.4%, 83%, 88.8%, 100%

Mean: 52.1% Test #4

5-number summary: n = 22

10, 35, 55.05, 63.5, 89

10%, 35%, 55.1%, 63.5%, 89%

Homework Lacking!

HOMEWORK

5-number summary: 3%, 59%, 76.6%, 88.6%, 100%

QUIZZES

5-number summary: 5.7%, 61.6%, 76.8%, 84.2%, 96.5%

WEIGHTED

TOTAL %

5-number summary: 6%, 62.1%, 73.1%, 85.7%, 97.1%

Test 4 Review

- ▼ Two events are ____ if the outcome of one does affect the probability of the other event.
- ▼ Two events are _____ if they cannot occur together.
- ▼ Two events are _____ if they can occur together.
- ▼ _____ probability is determined by the number of ways an event can occur divided by the total number of observations.
- ▼ _____ probability is determined by the number of ways an event can occur divided by the total number of outcomes.
- ▼ Two events are ____ if the outcome of one does not affect the probability of the other event.
- ▼ The ratio of the number of ways an event can occur to the number of ways an event cannot occur.

- a. Overlapping
- b. Odds
- c. Theoretical
- d. Independent
- e. Observational
- f. Mutually
Exclusive
- g. Dependent

Question 2.

Version 1*/1. Score: 4/5

Save Changes

<https://www.myopenmath.com/assess2/gbviewassess.php?stu=0&cid=52171&aid=3787708&uid=2429093>

2/

1/12/2019

MyOpenMath

If the probability of the Seattle Mariners winning the World Series is $\frac{2}{35}$

What are the odds of the Mariners winning the World Series? ♂ :

♂

What is the probability of the Mariners not winning?

♂ 0.94285714285714

$$\frac{33}{35} = .942857$$

What are the odds of the Mariners not winning? ♂ :

♂

Score: /1 /1 /1 /1 /1

Time spent on this version: 1.8 minutes

⋮

Question 3.

Version 1*/1. Score: 5/5

A poll showed that 71% of Americans say they believe that some psychics can help solve murder cases. What is the probability of randomly selecting someone who does not believe that some psychics can help solve murder cases. (Express answer as a decimal)



Score:

/5



Time spent on this version: 1.2 minutes

Question 4.

Version 1*/1. Score: 5/5

<https://www.myopenmath.com/assess2/gbviewassess.php?stu=0&cid=52171&aid=3787708&uid=2429093>

3/11

12/2019

MyOpenMath

A group of people were asked if they owned a dog. 217 responded "yes", and 239 responded "no".

Find the probability that if a person is chosen at random, they own a dog.

☐ $\frac{217}{239}$ ☒ $\frac{217}{456}$ ☐ $\frac{22}{217}$ 

Question 5.

Version 1*/1. Score: 5/5

Kimberly buys a bag of cookies that contains 6 chocolate chip cookies, 8 peanut butter cookies, 5 sugar cookies and 8 oatmeal raisin cookies. What is the probability that Kimberly randomly selects a chocolate chip cookie from the bag, eats it, then randomly selects another chocolate chip cookie? Express your answer as a reduced fraction.

$$\frac{5}{117}$$



Score: 5

/5

Full credit

Add feedback



Time spent on this version: 1.8 minutes

Question 6.

Version 1*/1. Score: 5/5

Save Changes

Giving a test to a group of students, the grades and gender are summarized below

	A	B	C	Total
Male	17	7	3	27
Female	14	12	15	41
Total	31	19	18	68

If one student is chosen at random,

Find the probability that the student was male OR got an "A".

$$\frac{41}{68}$$



Question 7.

Version 1*/1. Score: 5/5

A jar contains 8 red marbles, numbered 1 to 8, and 11 blue marbles numbered 1 to 11.

a) A marble is chosen at random. If you're told the marble is blue, what is the probability that it has the number 3 on it?

b) ~~The first~~ marble is replaced, and another marble is chosen at random. If you're told the marble has the number 10 on it, what is the probability the marble is blue?

 Score: /2.5 /2.5 [Full credit all parts](#) [Add feedback](#)

Time spent on this version: 1.8 minutes

[Save Changes](#)

Question 8.

Version 1*/1. Score: 5/5

Suppose a jar contains 12 red marbles and 23 blue marbles. If you reach in the jar and pull out 2 marbles at random at the same time, find the probability that both are red.

$$\frac{66}{595}$$



Score:

5

/5

Full credit

Add feedback



Time spent on this version: 1.7 minutes

Question 9.

Version 1*/1. Score: 5/5

Mama Joan's sells only pizza. They offer four types of crust, five types of cheese, three meat toppings and six vegetable toppings. If you must order exactly one type of cheese, one meat topping and one vegetable topping on your pizza, how many different pizzas can you order at Mama Joan's?

360



Score:

5

/5

Full credit

Add feedback



Time spent on this version: 0.9 minutes

Question 10.

Version 1*/1. Score: 0/5

A school dance committee is to consist of 2 freshmen, 3 sophomores, 4 juniors, and 5 seniors. If 7 freshmen, 8 sophomores, 7 juniors, and 8 seniors are eligible to be on the committee, in how many ways can the committee be chosen?

Your answer is :

~~3080~~

2304960

Score: 0

/5

Full credit

Add feedback

Save Changes

<https://www.myopenmath.com/assess2/gbviewassess.php?stu=0&cid=52171&aid=3787708&uid=2429093>

11/12/2019

MyOpenMath

Time spent on this version: 2.3 minutes

Question 11.

Version 1*/1. Score: 5/5

Lucy Furr must supply 5 different bags of chips for a party. She finds 15 varieties at her local grocer. How many different selections can she make?

3003



Question 12.

Version 1*/1. Score: 0/5

9 sprinters have made it to the Olympic finals in the 100-meter race. In how many different ways can the gold, silver, and bronze medals be awarded?



504

Score:

0/5

Full credit

Add feedback



Time spent on this version: 0.6 minutes

Question 13.

Version 1*/1. Score: 5/5

A bag contains 1 gold marbles, 7 silver marbles, and 20 black marbles. Someone offers to play this game: You randomly select one marble from the bag. If it is gold, you win \$4. If it is silver, you win \$3. If it is black, you lose \$1.

What is your expected value if you play this game?

\$ 0.18




Save Changes

Question 14.

Version 1*/1. Score: 5/5

The PTO is selling raffle tickets to raise money for classroom supplies. A raffle ticket costs \$2. There is 1 winning ticket out of the 150 tickets sold. The winner gets a prize worth \$78. *Round your answers to the nearest cent.*

What is the expected value (to you) of one raffle ticket? \$ 

Score: /5




Time spent on this version: 2.6 minutes

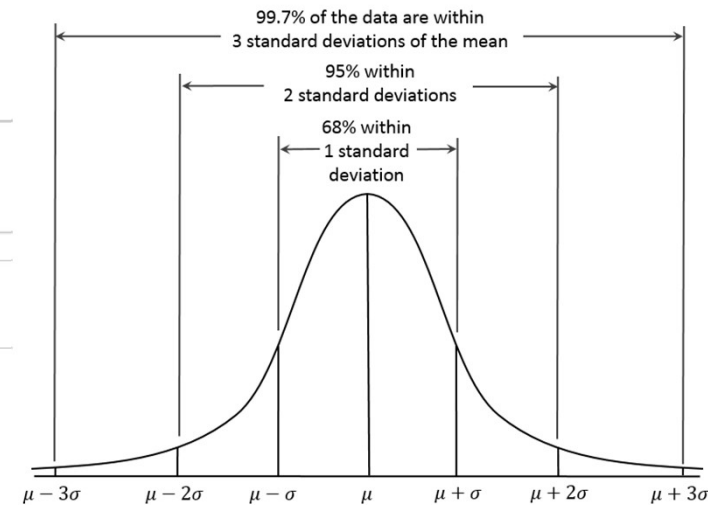
Question 15.

Version 1*/1. Score: 5/5

Fill in the blanks.

In a normal distribution,  percent of the data are above the mean, and  percent of the data are below the mean.

Similarly,  percent of all data points are within 1 standard deviation of the mean,  percent of all data points are within 2 standard deviations of the mean, and  percent are within 3 standard deviations of the mean.



Question 16.

Version 1*/1. Score: 6/6

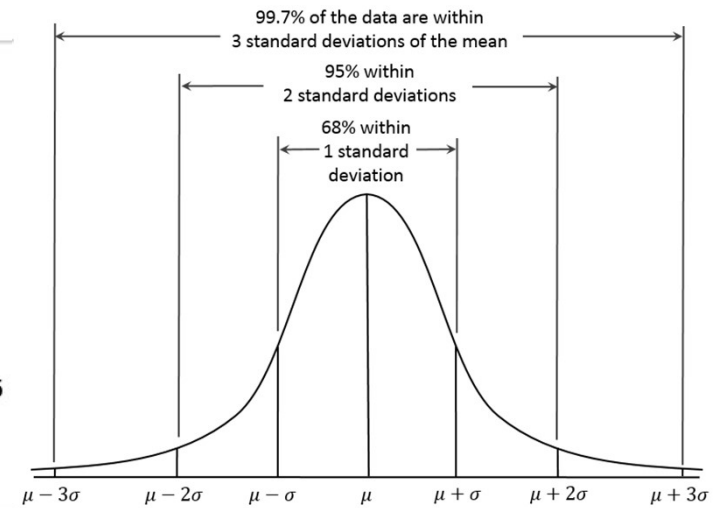
Fill in the blanks.

The depth of the snow in my yard is normally distributed, with a mean of 2.5 inches and a standard deviation of 0.25 inches.

What value is one standard deviation below the mean? σ inches

What value is one standard deviation above the mean? σ inches

What is the probability that a randomly chosen location will have a snow depth between 2.25 and 2.75 inches? σ percent



Score: /2 /2 /2 [Full credit all parts](#) [Add feedback](#)

Time spent on this version: 1.5 minutes

Question 17.

Version 1*/1. Score: 5/5

Consider the Standard Normal distribution.

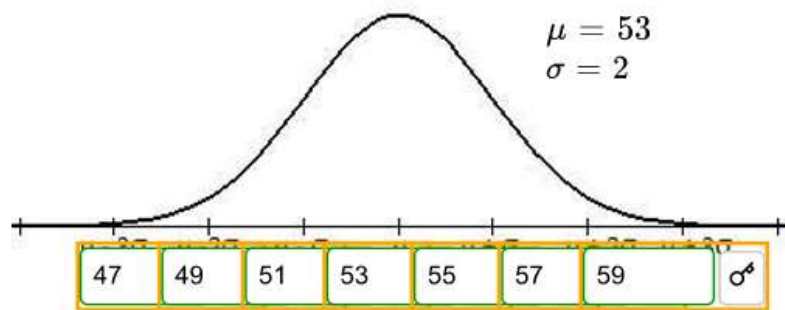
The mean is always σ and the standard deviation is always σ .

Version 1*/1. Score: 7/7

11/12/2019

The time to complete an exam is approximately Normal with a mean of 53 minutes and a standard deviation of 2 minutes.

The bell curve below represents the distribution for testing times. The scale on the horizontal axis is equal to the standard deviation. Fill in the indicated boxes.



Question 19.

Version 1*/1. Score: 5/5

A normal distribution has a mean of 108 and a standard deviation of 10. Find the z-score for a data value of 135.



Round to two decimal places

Final Exam

- Wednesday, Thursday, Friday Dec 11/12/13
- Test Centers Or Proctor U
- Test Centers - Swainsboro, Statesboro, or Augusta
- **Let me know by Friday 15th about place or ProctorU**
- Pick Place/Date/am or pm
- Test Center preferred unless it is too far
- Test will Be paper multiple choice at Test Centers
- Test will be on D2L Multiple Choice with ProctorU

More About ProctorU Testers

- Costs about \$25
- Sign up with ProctorU at <https://www.proctoru.com/>
- Pick any two hour period during 72 hour final exam period
- Wi-Fi/Internet/Computer/Camera must be tested & fast
- Take allowed formula and note sheet(s) which I will provide

Prepare for Final Exam

- Learn how to work all problems missed on Tests 1-4
- Take Practice Final on D2L – Password is egsc
 - Make 90 – Add 3 points to final exam
 - Make 80 – Add 2 points to final exam
 - Make 70 – Add 1 point to final exam
- Work Practice Final Version 2 on my web page
[Math 1001 Final Practice](#)
- Watch my video on working Practice Final
To be posted
- If you pass the final, you will pass the course even if average before final is failing. Prepare for final!