

# Module 4: Quiz

**Due** Oct 23 at 11:59pm

**Points** 10

**Questions** 10

**Time Limit** 30 Minutes

**Allowed Attempts** Unlimited

## Instructions

 [Module 1 Table of Contents](#)



## Purpose

The module quizzes can help you check your learning and prepare you for the objective question section of the exams.

The quiz is aligned with module learning objectives.

## Directions

- There are 10 objective questions.
- The questions will be randomly drawn from large pools.
- You can access the test three times, and the highest grade will be included in your course grade.
- There is a 30 minutes time limit in the test. You will be able to see if you answered each question correctly after

each attempt, but you won't see the correct answers to

the questions that you missed.

- After each attempt, reflect on how you did on the test to identify the areas that you need to improve. You may want to practice solving additional problems that are similar to those you didn't do well in the test. You should see an improvement in the second attempt and have an idea of how to prepare for your exam after completing this test.

## Submission

Click the Take the Quiz button below to begin the quiz.

## Grading

The module quizzes are graded and worth 9% of your course grade.

Proceed to the next page by clicking the Next button below.

Take the Quiz Again

## Attempt History

	Attempt	Time	Score
KEPT	<a href="#">Attempt 3</a>	30 minutes	4 out of 10
LATEST	<a href="#">Attempt 8</a>	13 minutes	3 out of 10
	<a href="#">Attempt 7</a>	30 minutes	0 out of 10
	<a href="#">Attempt 6</a>	30 minutes	0 out of 10
	<a href="#">Attempt 5</a>	21 minutes	3 out of 10

Attempt	Time	Score
<a href="#">Attempt 4</a>	30 minutes	2 out of 10
<a href="#">Attempt 3</a>	30 minutes	4 out of 10
<a href="#">Attempt 2</a>	4 minutes	3 out of 10
<a href="#">Attempt 1</a>	1 minute	3 out of 10

❗ Correct answers are hidden.

Score for this attempt: **3** out of 10

Submitted Oct 23 at 11:17am

This attempt took 13 minutes.

Incorrect

### Question 1

0 / 1 pts

Bernice will distribute \$1000 among her five employees for a year-end bonus. The bonus received by each employee will be an integer number of dollars between \$0 and \$1000. How many different ways are there for her to distribute the \$1000?

- ☒ (10005)
- ☐ (10051000)
- ☐ (10044)
- ☐ (1004999)

Unanswered

### Question 2

0 / 1 pts

How many strings are there over the alphabet {a, b, c} that begin with the letter b and have length 7 or 8?

☐  $36+37$ ☐  $37\cdot38$ ☐  $2\cdot36+2\cdot37$ ☐  $37+38$ **Question 3****1 / 1 pts**

A lunch special at the local diner comes with a choice of beverage, choice of sandwich, and choice of side. There are 4 different beverages, 7 different sandwiches, and 3 different sides. Two of the sandwiches can be ordered toasted or cold. The other five are always served cold. How many different choices are there for a lunch special?

☐  $4+(2\cdot2+5)+3$ ☐  $4+(2\cdot2+7)+3$ ☒  $4\cdot(2\cdot2+5)\cdot3$ ☐  $4\cdot(2\cdot2+7)\cdot3$ **Incorrect****Question 4****0 / 1 pts**

20 identical prizes are distributed to a group of 180 people. How many ways are there to distribute the prizes if each person can receive at most one prize?

☐  $(18020)$

☒  $P(180,20)$ ☐  $(199179)$ ☐ 18020

Incorrect

**Question 5****0 / 1 pts**

A class of 35 students with 17 boys and 18 girls must select 10 leaders. How many ways are there to select the 10 leaders if at least one girl and at least one boy must be selected?

☐  $(3510) - (1810) - (1710)$ ☐  $(3510) - (1810) \cdot (1710)$ ☐  $18 \cdot 17 \cdot (338)$ ☒  $18 \cdot 17 \cdot P(33,8)$ 

Incorrect

**Question 6****0 / 1 pts**

Each person in a group weighs at least 100 pounds and at most 130 pounds. How large must the group be in order to guarantee that there are at least 2 people whose weights differ by at most 9 pounds?

☐ 5 people☒ 6 people☐ 30 people

☐ 31 people

**Question 7****1 / 1 pts**

Select the 4-subset from  $\{1, 2, 3, 4, 5, 6, 7, 8, 9\}$  that is the next one in lexicographic order after  $\{2, 4, 6, 7\}$ .

☒  $\{2, 4, 6, 8\}$

☐  $\{2, 4, 6, 9\}$

☐  $\{2, 4, 7, 8\}$

☐  $\{2, 5, 6, 7\}$

**Incorrect****Question 8****0 / 1 pts**

A basket holds a set of balls. Each ball is red, green, or blue. How many balls must there be in the basket in order to guarantee that there are at least 5 balls of the same color?

☐ 12 balls

☐ 13 balls

☐ 14 balls

☒ 15 balls

Incorrect

## Question 9

0 / 1 pts

The Binomial Theorem says that for any positive integer  $n$  and any real numbers  $x$  and  $y$ ,  $\sum_{k=0}^n \binom{n}{k} x^k y^{n-k} = (x+y)^n$ . Use the Binomial Theorem to select the correct value for  $\sum_{k=0}^n \binom{n}{k} (-2)^k$ .

☒ 0

☐ 1

☐  $(-1)^n$ 
☐  $(-2)^n$ 

## Question 10

1 / 1 pts

Using lexicographic ordering of 4-sets, select the two inequalities that are both correct.

☒  $\{2, 1, 4, 5\} < \{1, 16, 67, 4\} \{1, 5, 7, 8\} < \{1, 6, 67, 8\}$ 
☐  $\{2, 1, 4, 5\} > \{1, 16, 67, 4\} \{1, 5, 7, 8\} < \{1, 6, 67, 8\}$ 
☐  $\{2, 1, 4, 5\} < \{1, 16, 67, 4\} \{1, 5, 7, 8\} > \{1, 6, 67, 8\}$ 
☐  $\{2, 1, 4, 5\} > \{1, 16, 67, 4\} \{1, 5, 7, 8\} > \{1, 6, 67, 8\}$ 

Quiz Score: 3 out of 10