✓ **Congratulations! You passed!**

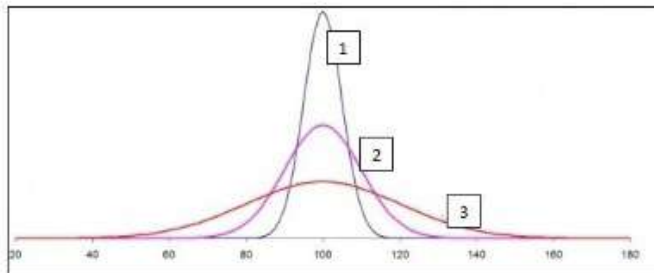**Grade received** 100%   **To pass** 80% or higher

[**Go to next item**]

Introduction to Probability Distribution

Latest Submission Grade 100%

1. For the below normal distribution, which of the following option holds true? σ1, σ2 and σ3 represent the standard deviations for curves 1, 2 and 3 respectively.

   | 1 / 1 point

   ○ σ1> σ2> σ3

   ◉ σ1< σ2< σ3

   ○ σ1= σ2= σ3

   ○ None

   ✓ **Correct**
   Correct! The wider the distribution plot, the higher the variability or deviation from the mean

2. A test is administered annually. The test has a mean score of 150 and a standard deviation of 20. If Chioma's z-score is 1.50, what was her score on the test?

   | 1 / 1 point

   ◉ 180

   ○ 150

   ○ 30

   ○ 130

   ✓ **Correct**
   Correct!

3. If a negatively skewed distribution (i.e. skewed to the left) has a median of 50, which of the following statements are true? (Select all that apply)

   | 1 / 1 point

   ☑ Mean is less than 50

   ✓ **Correct**
   Correct! Mean tends to move towards the tail of the data and mode does the opposite

   ☑ Mode is greater than 50

   ✓ **Correct**
   Correct! Mean tends to move towards the tail of the data and mode does the opposite

   ☐ None of the above

   ☐ Mean is greater than 50

4. What is the probability of getting two heads when two coins are flipped?

- ◉ 1/4
- ○ 1/2
- ○ 1/8
- ○ 1

✓ **Correct**
The probability of getting two heads is 1/2 x 1/2 (or 0.5 x0.5) which is 1/4 (or 0.25)

5. The probability of getting a double by rolling TWO six-sided dice (with sides labeled as 1, 2, 3, 4, 5, 6) is:

- ◉ 1/6
- ○ 2/36
- ○ 1
- ○ 1/36

✓ **Correct**
Correct!

6. What is the area under a conditional Cumulative Density Function?

- ○ 0
- ○ 0.5
- ◉ 1
- ○ 2

✓ **Correct**
Correct! The area under a Cumulative Density Function is calculated by adding the individual probabilities. This must always be equal to 1

7. Which of the following is a possible alternative hypothesis H1 for a two-tailed test.

- ○ μ is equal to 85
- ○ μ is greater than 85
- ◉ μ is not equal to 85
- ○ μ is less than 85

✓ **Correct**
Correct!

8. Green sea turtles have normally distributed weights, measured in kilograms, with a mean of 134.5 and a variance of 49.0. A particular green sea turtle's weight has a z-score of -2.4. What is the weight of this green sea turtle? Round to the nearest whole number.

- ○ 151kg
- ○ 17kg
- ○ 252kg
- ◉ 118kg

✓ **Correct**
Correct!

9. A normal distribution can best be described as which of the following? (Select all that apply)

☑ Symmetric

  ⊘ **Correct**
    Correct!

☑ Bell-shaped

  ⊘ **Correct**
    Correct!

☐ Skewed

☐ Uniform

10. In its **standardized** form, the normal distribution

○ has an area equal to 0.5.

○ has a mean of 1 and a variance of 0.

○ cannot be used to approximate discrete probability distributions.

◉ has a mean of 0 and a standard deviation of 1.

  ⊘ **Correct**
    Correct!