SHS LEARNING ACTIVITY

Name: _____ **Score/Mark:** _____
Grade and Section: _____ **Date:** _____
Strand: ☐STEM ☐ABM ☐HUMSS ☐ICT (*TVL Track*)
Subject: *Statistics and Probability*
Type of Activity ☐ Concept Notes ☐ Skills: Exercise / Drill ☐ Illustration
☐ Laboratory Report ☐ Essay/Task Report ☐ Others: _____

Activity Title: Random Variables: Discrete and Continuous
Learning Target: To distinguish between discrete and continuous random variable.
References: *(Author, Title, Pages)*
1) http://mathisfun.com/data/data-discrete-continuous.html;
2) R.A. Rañoa, J. Sadudaquil, L.A. Sajulga, CVIF Learning Activities

Two types of random variable:

1. **Discrete random variable** – may take a number of distinct values. These are usually (but not necessarily) counts such as 0, 1, 2, 3, 4,… A discrete variable can also take on countably infinite numbers that can be listed but have no specific end. It characterizes a **count** data of possible outcomes such as the number of children in each family in a community, the yearly enrollment in a school, and the daily number of bus passengers.

   Example: A coin is tossed ten times. The random variable X is the number of tails that are noted. X can only take the values of 0, 1, 2,…10, so X is a discrete random variable.

2. **Continuous random variable** – takes an uncountably infinite number of possible values within a *particular range or interval*. These are usually measurements such as height, weight, the amount of sugar in a mango, or the time taken to run 100 meters.

   Example: A light bulb is lighted until it burns out. The random variable Y is its lifetime in hours. Y can take any positive real value, so Y is a continuous random variable.

Exercise: Identify whether the given item is a continuous or discrete random variable.

_____ 1. X = "The length of a leaf"
_____ 2. Y = "Time in a swimming competition"
_____ 3. Z = "The number of endangered species in the Philippines"
_____ 4. Q = "The number of galaxies in the universe"
_____ 5. M = "The temperature in Baguio every month of December"