



**"WE TURN IMPOSSIBILITIES
INTO PROBABILITIES"**

UNIVERSITY OF THE PHILIPPINES VARIATES
THE ORGANIZATION OF STATISTICS MAJORS
SCHOOL OF STATISTICS, R. MAGSAYSAY ST.,
UNIVERSITY OF THE PHILIPPINES, DILIMAN, QUEZON CITY

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2016 - 2017**

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November 27, 2016

Beatriz G. Torno
Wangal, La Trinidad, Benguet

Dear Ms./Mrs. Torno,

We, the University of the Philippines Variates, would like to request for the endorsement of one of our organization's activities – the **Statistical Challenge XIX**.

The University of the Philippines Variates is a socio-academic organization in UP Dillman which concentrates on the betterment of the students of the School of Statistics. The main goal of the organization is to provide venues that will hone, not only its members' talents, but also develop their personalities and promote the uses and the importance of Statistics. Generally, UP Variates aims to shape its members into well-rounded individuals geared to face the challenges of the future. The Statistical Challenge XIX is one of the many ways UP Variates offers in order to stay true to these beliefs.

The Statistical Challenge XIX is an inter-secondary Statistical Quiz Show which aims to promote Statistics and to enrich the knowledge of high school students in the said field. The quiz show is now on its 19th year, and it will be held in the University of the Philippines Diliman, Quezon City on February 11, 2017, Saturday.

In line with this, we would like to request your office to please endorse this activity. Your endorsement will greatly improve the reception of prospective participating schools, as evidenced by the previous years of endorsement. Attached herewith is a copy of the event's mechanics. The said event is also endorsed by the national office of the Department of Education.

We will be looking forward to your favorable response.

Thank you.

Respectfully yours,

Neil S. Bungcayao
Chairperson
Academic Resource Committee

Bianca Ysabelle G. Cirio
President

Noted by:

Sabrina O. Romasoc
Faculty Adviser



THE STATISTICAL CHALLENGE XIX MECHANICS

PARTICIPANTS

The group of the participating secondary school shall consist of three (3) students of **grade 8 to grade 10 standing**. Participating students should be enrolled for the current school year.

RULES OF THE CONTEST

1. Each school will be required to bring at least 1 calculator. Only the following models of **CASIO** calculators shall be allowed in the contest: **fx-82MS, fx-85MS, fx-350MS, fx-95MS, fx-100MS, and fx-115MS**. These calculators are **2-liners** with **no integral and derivative functions**.
2. Each school shall be provided with **scratch papers** and an **illustration board** where participants should write their final answers.
3. Each question shall be read twice and the participants will be allowed to **start writing and computing only after the first reading**.
4. The participants will be given **time limits, varying in length**, to answer the question in the **Easy, Average, and Difficult Rounds**. They shall be **allowed to use calculators** for their computations.
5. When the buzzer sounds, each group must show the board containing their **final answers** to the judges and the audience.
6. The designated proctor for each school shall check the answer, and **shall raise a signboard, if the answer is correct**.

THE CONTEST

1. This contest is composed of **three (3) rounds**: the **Easy, Average, and Difficult Rounds**.
 - **EASY ROUND – Fifteen (15) questions** are to be asked. The time allotted for each question depends on the question's difficulty. Each correct answer shall be worth **two (2) points**.
 - **AVERAGE ROUND – There are ten (10) questions**. The time allotted for each question depends upon the question's difficulty. Each correct answer shall be worth **three (3) points**.
 - **DIFFICULT ROUND – There are seven (7) questions**. The time limit for each question depends on the question's level of difficulty. Each correct answer shall be worth **five (5) points**.
1. There will be **no elimination** for this year's contest.
2. Points in each round will be accumulated for the final score.
3. In case of a tie, **clincher questions** shall be asked. **The team who submits the correct answer first shall be recognized as the winner**.



PRIZES

- 1st prize winners shall be awarded gold medals, a trophy for their school, cash prize, and gift packs from our sponsors.
- 2nd prize winners shall be awarded silver medals, a trophy for their school, cash prize, and gift packs from our sponsors.
- 3rd prize winners shall be awarded bronze medals, a trophy for their school, cash prize, and gift packs from our sponsors.

COVERAGE OF THE QUIZ

- | | |
|----------------------------------|--|
| 1. Nature of Statistics | 5.1 Fundamental Principles of Counting |
| 1.1 Definition of Statistics | 5.2 Permutation |
| 1.2 Areas of Statistics | 5.3 Combination |
| 1.3 Uses of Statistics | 6. Elementary Probability |
| 2. Organization and Presentation | 6.1 Random Experiments and Sample Spaces |
| 2.1 Tabular Presentation | 6.2 Probability of an Event |
| 2.2 Graphical Presentation | 7. Correlations and Regressions |
| 3. Sampling Techniques | 7.1 Pearson's Correlation Coefficient |
| 3.1 Simple Random Sampling | 7.2 Simple Linear Regression |
| 3.2 Stratified Sampling | 8. Hypothesis Testing |
| 3.3 Cluster Sampling | 8.1 Principles of Hypothesis Testing |
| 3.4 Systematic Sampling | 8.2 Inferences for the Population Mean |
| 4. Summary Measures | 8.3 Comparison between Two Populations |
| 4.1 Measures of Central Tendency | 8.4 Test for Independence |
| 4.2 Measures of Position | 8.5 Analysis of Variance |
| 4.3 Measures of Dispersion | 9. Philippine Statistical System |
| 4.4 Standard Scores | |
| 4.5 Skewness and Kurtosis | |
| 5. Counting Techniques | |

HIGHLY RECOMMENDED REFERENCES

- Elementary Statistics (2010). Almeda, Capistrano, and Sarte. (Available at UP Press, National Bookstore and Powerbooks)
- Introduction to Statistics (3rd Edition). Walpole.
- Introduction to Statistics and Probability. Mendenhall.

OTHER IMPORTANT REMINDERS

1. Participants should come in their **school uniform with their school IDs**.
2. A **registration fee of Php 600** is required from each participating school, which can be deposited through our Landbank account. Deadline is on January 20, 2017 or you may pay a **registration fee of P700** on the day of the contest itself.



Landbank Account Details:

Account Name: **University of the Philippines Variates, Inc.**

Address: School of Statistics R. Magsaysay St., UP Campus Diliman, Quezon City

Account Number: **3071-0297-77**

3. Registration period is until **January 20, 2017**.
4. Each contestant is required to submit the following:
 - a. **One 1x1 recent ID picture**
 - b. **Photocopy of school registration** material or letter of enrolment attesting that the contestant is enrolled for **School Year 2016-2017**.
5. Submit the reply form and the accomplished registration forms with the rest of the requirements on or before January 20, 2017.
6. If paying through our Landbank Account, please include a copy of the deposit slip. You can drop off the forms at the **UP Variates, Inc. Tambayan, School of Statistics Building, Magsaysay Avenue, University of the Philippines, Diliman, Quezon City, 1101**. We also accept mailed entries. Please forward them to **Ms. Sabrina O. Romasoc** at the same address.
7. Otherwise, you may send a scanned copy of the said requirements to our e-mail address: **statisticalchallenge19@gmail.com**
8. For further announcements, visit and like our Facebook page: **www.facebook.com/StatisticalChallenge** or follow us on Twitter: **@StatChallenge**.

**The Quiz Show has been successfully realized for the past 18 years.
In its 19th year, join us in breaking the confinements set by normality.**

