Republic of the Philippines
Department of Education
National Capital Region
SCHOOLS DIVISION OFFICE
Quezon City, Metro Manila

Name: _____ Date: _____
Grade & Section: _____ Score: _____

Mathematics
Quiz Bee
S.Y. 2019–2020

Write the correct answer in the blank.
You may use the back of the paper for your computations.

_____ 1. What is the degree of the polynomial function $P(x) = 3x - 9x^3 + 5x^4 - 5$?

_____ 2. Given the polynomial function $P(x) = 121x^2 - 5x^{11} + x^8 + 2x^5 - 50$, find its leading term.

_____ 3. If three geometric means are inserted between 1 and 256, find the third geometric mean.

_____ 4. What is the next term in the harmonic sequence $\frac{1}{11}, \frac{1}{15}, \frac{1}{19}, \frac{1}{23}, \ldots$?

_____ 5. The polynomial function $P(x) = 4x^4 - 17x^2 + 4$ has how many possible rational zeros?

_____ 6. What is the next term in the geometric sequence 4, 12, 36?

_____ 7. Find the common difference in the arithmetic sequence $3, \frac{13}{4}, \frac{7}{2}, \frac{15}{4}$.

_____ 8. If $(x - 1)$ is a factor of the polynomial $x^2 - 2x + 1$, what is the other factor?

_____ 9. Find the equation of a quadratic function whose zeros are 5 and -3.

_____ 10. Find the remainder of $P(x) = 3x^{100} - 4x^{50} + 8$ divided by $(x + 1)$.

_____ 11. What do we call an angle formed by two rays whose vertex is the center of a circle?

_____ 12. What do we call the points where the graph of a function intersects the x-axis?

_____ 13. What are the end behaviors of the graph of the polynomial function $y = x^3 + 3x^4 - x^5 - 7x^2 + 4$?

_____ 14. Which term determines how many times a particular number is a zero or root for a given polynomial?

_____ 15. What should n be if $f(x) = x^n$ defines a polynomial function?

_____ 16. What is an angle whose vertex is on a circle and whose sides contain chords of the circle?

_____ 17. In a circle, if a central angle measures $60°$, what is the measure of its intercepted arc?

_____ 18. A dart board has a diameter of 40 cm and is divided into 20 congruent sectors. What is the area of one of the sectors?

_____ 19. What is the y-intercept of the graph of the polynomial function $f(x) = -2x + x^3 + 3x^5 - 4$?

_____ 20. How many turning points does the polynomial function $f(x) = -2x + x^3 + 3x^5 - 4$ have?

_____ 21. Choosing a subset of a set is an example of ____.

_____ 22. What are the coordinates of the center of the circle defined by the equation $x^2 + (y - 5)^2 = 8$?

_____ 23. What do we call the product of a positive integer n and all the positive integers less than n?

_____ 24. A radio signal can transmit messages up to a distance of 3 km. If the radio signal's origin is located at a point whose coordinates are $(4, 9)$, what is the equation of the circle that defines the boundary up to which the messages can be transmitted?

_____ 25. How many different 4-digit even numbers can be formed from the digits 1, 3, 5, 6, 8, and 9 if no repetition of digits is allowed?

_____ 26. What is the center of the circle $x^2 + y^2 - 4x + 10y + 13 = 0$?

_____ 27. In how many ways can 8 people be seated around a circular table if two of them insist on sitting beside each other?

_____ 28. On a grid map of a province, the coordinates that correspond to the location of a cellular phone tower is $(-2, 8)$ and it can transmit signals up to a 12 km radius. What is the equation that represents the transmission boundaries of the tower?

_____ 29. In a town fiesta singing competition with 12 contestants, in how many ways can the organizer arrange the first three singers?

_____ 30. If a combination lock must contain 5 different digits, in how many ways can a code be formed from the digits 0 to 9?

Life is the most difficult exam. Many people fail because they try to copy others, not realizing that everyone has a different question paper!