

2019 Metrobank-MTAP-DepEd Math Challenge
Elimination Rounds
Grade 5

- _____ 1. What is the missing addend in the statement below?
 $20 + 22 + 24 + 26 + 28 = 21 + 23 + \underline{\hspace{2cm}} + 25 + 27$
- _____ 2. What is the average of 17, 20, 23, 26, 29, 32, and 35?
- _____ 3. If $a + b = 78$, $b + c = 121$, and $a + c = 125$, what is $a + b + c$ equal to?
- _____ 4. Which is the value of the expression $\frac{1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10}{40 + 36 + 32 + 28 + 24 + 20 + 16 + 12 + 8 + 4}$?
- _____ 5. Two sides of a triangle have lengths 30.45 cm and 39.27 cm. If the perimeter of the triangle is 120 cm, how long is the third side?
- _____ 6. The area and perimeter of a square are numerically equal. What could be the length of the side of the square?
- _____ 7. Given: $1 + 3 = 4$; $1 + 3 + 5 = 9$; $1 + 3 + 5 + 7 = 16$; $1 + 3 + 5 + 7 + 9 = 25$
What is the sum of the first 36 odd numbers?
- _____ 8. In the set {440, 450, 460, 480}, which of the numbers is a sum of four consecutive whole numbers?
- _____ 9. What is 25% of five-eighths of 702 080?
- _____ 10. In the set $\{\frac{18}{25}, \frac{7}{9}, \frac{3}{4}, \frac{2}{3}, \frac{1}{2}\}$, which of the fractions has the greatest value?
- _____ 11. If $\frac{1}{2}(a + b + c) = 185$ and $\frac{1}{4}(d + e) = 177$, what is the average of a, b, c, d, e ?
- _____ 12. Determine the set of the prime factors of 6 000.
- _____ 13. What is the product of the LCM and GCF of 64 and 60?
- _____ 14. The numbers 191, 999, and 12321 are called palindromes. In a palindrome, the arrangements of the digits from left to right and right to left are the same. What is the least number that should be added to 2018 to get a five-digit palindrome?
- _____ 15. What is the sum of $\frac{1}{2} + \frac{2}{4} + \frac{3}{6} + \frac{4}{8} + \frac{5}{10} + \dots$ and so on in that pattern up to $\frac{130}{260}$?
- _____ 16. A 3-by-5 rectangle is partitioned into 1-by-1 squares. How many squares are formed in all?
- _____ 17. What is the missing number n in the proportion $9 : n = n : 16$?
- _____ 18. The five-digit number, $8b9d8$, is both divisible by 4 and 6. After replacing b and d with the appropriate digits, the number formed is in its least possible value. What is the number?
- _____ 19. Segment AB has four other distinct points between its endpoints A and B. How many segments are determined by these points?
- _____ 20. What is the sum of the first 20 even numbers starting from 2?
- _____ 21. How many pieces of coins are there in 500-peso worth of 10-centavo coins and 500-peso worth of 5-centavo coins?
- _____ 22. What is the equivalent of the expression when written as a simple fraction?
 $[(10\% + 1\% + 0.1\% + 0.01\% + 0.001\% + \dots) \times 6]$
- _____ 23. How many halves are there in $100.75 + 50.75$?
- _____ 24. There are 2 424 math books in a library. This is 20% of the books in the library. How many books in the library are NOT math books?
- _____ 25. If $x = 1 + 2 + 3 + 4 + 5$, what is the value of $(x + 1 + 2 + 3 + x + 4 + 5 + 6 + x + 7 + 8 + 9 + x)$ multiplied by x written in standard form?
- _____ 26. How many whole numbers n will make $\frac{200}{n}$ a whole number?
- _____ 27. In the set $\{\frac{3}{9}, \frac{3}{6}, 33\frac{1}{3}, \frac{4}{12}, \frac{5}{25}, \frac{5}{15}, \frac{123}{369}, \frac{17}{51}, \frac{19}{38}, 0.333333\dots\}$, how many of the numbers are equal to $33\frac{1}{3}\%$?
- _____ 28. One-digit whole numbers x and y have exactly four factors each. Also, $x + y$ has exactly four factors. What is the value of $x + y$?

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METROBANK MTAP-DEPED MATH CHALLENGE

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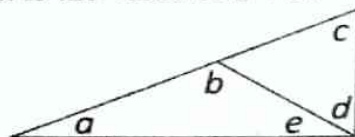
- _____ 29. What is the value of n in the equation $(\frac{1}{2})^2 \times (\frac{2}{3})^2 \times (\frac{3}{4})^2 \times \dots \times (\frac{9}{10})^2 = n$?
- _____ 30. What is thrice the value of $\frac{1+2+3+4+5+6}{18+15+12+9+6+3}$?
- _____ 31. What digit is the units place in the sum of $3^5 + 5^5 + 2^5$?
- _____ 32. What is the digit in the tenths place when thrice of 45 678 is divided by 1 000?
- _____ 33. What is the sum of $[\frac{1+2+3+4}{2+4+6+8}] + [\frac{1+2+3+4}{3+6+9+12}] + [\frac{1+2+3+4}{6+12+18+24}]$?
- _____ 34. Josefania is making a necklace with beads in a repeating pattern of RED, BLUE, GREEN, YELLOW, ORANGE. What is the color of the 888th bead if the first bead is GREEN?
- _____ 35. What is the mean of all the dates in the month of October?
- _____ 36. Pedrito and Pedrita are siblings. Pedrito said, "I have as many brothers as sisters." Pedrita said, "I have twice as many brothers as sisters." How many of them are boys and how many of them are girls?
- _____ 37. What is the last digit of the number 2^{2018} when it is written in standard form?
- _____ 38. If $a = 2b = 3c = 9$, what is value of $64 \times a \times b \times c + 1$?
- _____ 39. What digit can be used to replace x in the given table?

3	7	8	3	6
1	2	8	2	5
x	0	6	6	1

- _____ 40. If I add 14 to my house number, the sum is a perfect square. If I subtract 14 from my house number, the sum is also a perfect square. What is my house number?
- _____ 41. How many of the whole numbers less than 10 are NOT prime?
- _____ 42. What is the 9th term in the sequence 2, 5, 10, 17, 26, 37, 50, ...?
- _____ 43. The average of 40 numbers is 38. If three numbers are discarded, namely 40, 24, and 50, what is the average of the remaining numbers?
- _____ 44. How many 25-centavo coins are in a Pondo ng Pinoy collection amounting to ₱555.50?
- _____ 45. How many months of the year have number of days NOT exactly equal to $4\frac{2}{7}$ weeks?
- _____ 46. Two numbers are equidistant from the number 37.5 on a number line. If the numbers are 37.5 units away from each other, what are the numbers?
- _____ 47. Consecutive numbers are plotted in rows and columns as shown. In what column will 200 fall?

C	O	U	N	T
	2	3	4	5
9	8	7	6	
	10	11	12	13
17	16	15	14	
	18	19	20	21 etc

- _____ 48. What number is formed out of the last three digits, in the order as they occur, when $5^{10} + 5$ is written in standard form?
- _____ 49. What is the least common multiple of all the whole numbers from 2 to 9?
- _____ 50. The big triangle is partitioned into two smaller triangles. If $a = 38$ degrees, $b = 96$ degrees, and $c = 48$ degrees, what is the value of $d + e$?



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2019 Metrobank-MTAP-DepEd Math Challenge Elimination Rounds, Grade 5, Answer Key

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|-----|---------------|-----|-----------------|-----|--------------------------------------------------------|
| 1. | 24 | 18. | 80928 | 35. | 16 |
| 2. | 26 | 19. | 15 | 36. | 4 boys and 3 girls |
| 3. | 162 | 20. | 420 | 37. | 4 |
| 4. | $\frac{1}{4}$ | 21. | 15 000 | 38. | 7 777 |
| 5. | 50.28 cm | 22. | $\frac{2}{3}$ | 39. | 5 |
| 6. | 4 units | 23. | 303 | 40. | 50 |
| 7. | 1 296 | 24. | 9 696 | 41. | 6 |
| 8. | 450 | 25. | 1 575 | 42. | 82 |
| 9. | 109 700 | 26. | 12 | 43. | 38 |
| 10. | $\frac{7}{9}$ | 27. | 6 | 44. | 2 222 pieces |
| 11. | 215.6 | 28. | 14 | 45. | 8 |
| 12. | {2, 3, 5} | 29. | $\frac{1}{100}$ | 46. | $18\frac{3}{4}$ and $56\frac{1}{4}$ or 18.75 and 56.25 |
| 13. | 3 840 | 30. | 1 | 47. | Letter O |
| 14. | 10 003 | 31. | 0 | 48. | 630 |
| 15. | 65 | 32. | 0 | 49. | 2 520 |
| 16. | 26 | 33. | 1 | 50. | 94 degree |
| 17. | 12 | 34. | ORANGE | | |