Department of Education
Region 10
Regional Achievement Test
Mathematics 6

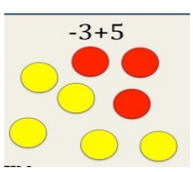
Directions: Read each question carefully and choose the letter of the correct answer.

A. Problem Solving

1. Mother bought additional vegetables ingredients in the market for cooking Penakbet in an event. She bought 1 1/16 kg of squash, 3/4 kg of eggplant, 2 1/16 kg of Okra, 1 3/4 kg of bitter gourd. Which of the vegetables that Mother bought weigh 3 1/8 kg in all?
   A. Squash and Eggplant
   B. Eggplant and Bitter gourd
   C. Okra and Squash
   D. Bitter gourd and Okra
2. Cardo needs 12 2/4 liters of blue paint for the repainting of the entire perimeter fence in their house and 8 1/4 liters of green paint for the entire house wall. How many liters of paint does he need in all? How much more material does he need for the perimeter fence than the entire house wall?
   A. 20 liters in all; 4 liters
   B. 20 ¼ liters in all; 4 ½ liters
   C. 20 ½ liters in all; 4 ¾ liters
   D. 20 ¾ liters in all; 4 ¼ liters
3. Cara reads 1/3 part of a book in 1 hour. How much part of the book will he read in $2^{1}/_{5}$ hours?
   A. 11/15
   B. 1 11/15
   C. 2 11/15
   D. 3 11/15
4. What is 1/2 of 2 1/4?
   A. 1 1/8
   B. 1 1/2
   C. 1 3/4
   D. 1 4/5
5. There is 5 4/5 cake on the table. One serving is 1/10 of a whole cake. How many servings can be made?
   A. 54
   B. 56
   C. 58
   D. 60
6. Luna uses 1 1/4 dm of Japanese colored paper to make an artificial flower. She has 10 dm of colored paper to use. How much will she get if she sells each flower she makes for Php7.00?
   A. Php56.00
   B. Php60.00
   C. Php64.00
   D. Php70.00
7. 234.45 added to the difference of 89.8 and 23.765 is _____.
   A. 234.45
   B. 258.215
   C. 300.485
   D. 324.25
8. Tara needs Php48.50 for her project in TLE. She has already saved Php27.75 from her daily allowance. How much more does she need to have the amount for her project?
   A. Php20.25
   B. Php20.50
   C. Php20.75
   D. Php21.25
9. Of the 41 kg of fruits Jaira had sold, 5.75 kg were mangoes, 21.5 kg were lanzones, and the rest were papayas. How many kilograms were papayas?
   A. 11.75
   B. 12.75
   C. 13.75
   D. 14.75

10. If one US dollar is equal to Php55.70 and one Kuwaiti Dinar is equal to Php183.46, how much more is the value in Philippine pesos of a Kuaiti Dinar than a US Dollar?
    A. Php122.76
    B. Php127.76
    C. Php132.36
    D. Php132.76
11. Cherry decides to save ₱20.25 each week from her allowance to buy a gift for his father's birthday. If she saves for 5 weeks, how much is the most expensive gift that she can buy using all her savings?
    A. Php 100.00
    B. Php 101.25
    C. Php 102.50
    D. Php 103.75
12. Mrs. Juan bought a 5-kg bag of rice for Php 298.75 and 6 cans of corned tuna at Php 37.25 each. She gave the seller a Php500 bill and Php100 bill. How much change did she get?
    A. Php 77.25
    B. Php 77.50
    C. Php 77.75
    D. Php 78.00
13. Adult tickets in an animal show sells at ₱125.05 and children at ₱99.35. If 25 parents and 70 children watched that show, how much did the show earn?
    A. Php 10080.00
    B. Php 10080.25
    C. Php 10080.50
    D. Php 10080.75
14. What is the quotient if you divide 12.6 by 6?
    A. 0.21
    B. 2.1
    C. 2.11
    D. 21.1
15. Cheena will cut 10.8 meters of lace into pieces 0.9 meter each. How many pieces of ribbon will she have?
    A. 11
    B. 12
    C. 13
    D. 14
16. A jogger runs 5 times in an open field. He runs a total distance of 8.25 km. How many kilometers did he jog each time?
    A. 1.56
    B. 1.65
    C. 5.61
    D. 6.51
17. Ali worked 8.25 hours and was paid Php 907.50. Felix worked 7.5 hours and was paid Php 1387.50. How much more was Felix paid per hour than Ali?
    A. Php 25.00
    B. Php 50.00
    C. Php 75.00
    D. Php 100.00
18. A cashier in a certain department store counted Php1,250 in 50-peso bills and Php4820 in 20-peso bills. How many more 20-peso bills than 50-peso bills did the cashier count?
    A. 210
    B. 216
    C. 241
    D. 250
19. Solve for n. 1:4 = n:48
    A. 10
    B. 12
    C. 14
    D. 16
20. if 8 seamstress can embroider a bedsheet in 12 days, how many seamstress will be needed to do the same work in 16 days?
    A. 6
    B. 8
    C. 12
    D. 18

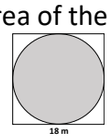
21. Rea conducted a survey about the favorite snacks of 32 of her classmates. She found that 25% of them prefer banana cue. How many of her classmates prefer banana cue?
    A. 4
    B. 6
    C. 8
    D. 10
22. What is 90% of a 50-item test?
    A. 30
    B. 35
    C. 40
    D. 45
23. Rosa's mother got a Php 5,000.00 loan from a cooperative bank. Her mother agreed to pay the loan in 2 years at the rate of 5 1/2% per year. How much will he pay for the loan?
    A. Php 4,550.00
    B. Php 5,000.00
    C. Php 5,550.00
    D. Php 6,000.00
24. A Php 455.00 umbrella is on sale at 15% discount. How much will a buyer pay for 5 umbrellas?
    A. Php 1,386.75
    B. Php 1,533.75
    C. Php 1,820.75
    D. Php 1,933.75
25. What is the value of 7 raised to the third power?
    A. 333
    B. 334
    C. 343
    D. 433
26. What is the value of 11 cubed?
    A. 1133
    B. 1313
    C. 1331
    D. 3311
27. Solve for N: $6 \div 2 + 3 \times 4 = N$
    A. 6
    B. 15
    C. 24
    D. 36
28. Evaluate $5^2 - 2 \times 5 \div (6 + 4)$
    A. 15
    B. 21
    C. 24
    D. 25
29. Using the following chips: 3 red chips for -3 and 5 yellow chips for +5 , what will be the answer for this expression?



    A. +8
    B. +2
    C. -2
    D. -8
30. Using these cards, 6 black flower card as +6, and 8 red diamond card as -8, evaluate: +6 + (-8).

    A. -14
    B. -2
    C. +2
    D. +14

31. (-91) ÷ (-7) = N
    A. +637
    B. +13
    C. -13
    D. -637
32. (-4) + (-3) – (-6) = N
    A. +13
    B. +1
    C. -1
    D. -13
33. Ben was born in 1994. He subtracted his birth year from that of his grandmother and got an answer of -88. In what year was his grandmother born?
    A. 1960
    B. 1946
    C. 1936
    D. 1906
34. Teacher Dona asks Anne to make a prism having only three rectangular lateral faces. What should be the shape of the base?
    A. pentagon
    B. rectangle
    C. square
    D. triangle
35. In the sequence 3, 8, 13, 18,…, what is the rule in finding the nth term?
    A. n + 5
    B. 5n - 2
    C. 2n + 1
    D. 5 - 2n
36. What is the 7th term in the sequence 2, 8, 14, 20, 26, ___, ...?
    A. 30
    B. 32
    C. 36
    D. 38
37. There are n cookies in each pack. Bert bought 3 packs while Barry bought 6 packs. What is the expression for the total number of chocolates bought by the two boys?
    A. n + 3 + 6
    B. 3n + 6
    C. 3n + 6n
    D. 3 + 6n
38. There were n mangoes in a kilogram. Liz bought 4 kg but they were so good she went back to buy 3 kg more. Which expression represents the total number of mangoes Liz bought?
    A. 4 + 3
    B. 4n x 3n
    C. 4n + 3n
    D. n + 4 + 3
39. A delivery truck traveling at an average speed of 65 km/h left the city at 5:00 a.m. If it arrived in another city at 8:00 a.m., how far are the two cities?
    A. 130 km
    B. 195 km
    C. 260 km
    D. 325 km
40. An Olympic swimmer swims 76 meters in 40 seconds. Find his average rate per second.
    A. 1.5 m/s
    B. 1.76 m/s
    C. 1.9 m/s
    D. 1.94 m/s
41. What is the area of the circle in the given figure? Use π = 3.14



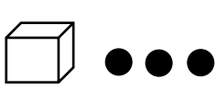
    A. 56.52 m^2
    B. 162 m^2
    C. 254.34 m^2
    D. 324 m^2

42. The base of a cylinder has a diameter of 12 cm. If it is 8 cm high, find the surface area of the cylinder.
    A. 226.08 cm^2
    B. 301.44 cm^2
    C. 525.72 cm^2
    D. 527.52 cm^2
43. Mathew bought his son a magic cube whose side measures 9 cm. If he covered it completely with a felt paper, how many square centimeters did he use?
    A. 54 cm^2
    B. 81 cm^2
    C. 486 cm^2
    D. 729 cm^2

B. Critical Thinking

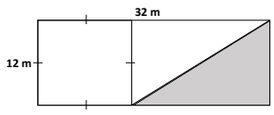
44. Aling Ola, a dressmaker, has 3 ¼ m of fabric suitable for making curtains and pillow cases. She plans to use 2 ½ m for curtains. Does she have enough fabric left to make two pillow cases that will use 5/8 m? Why?
    A. Yes, because she has 6/8 m of the fabric left and she will only use 5/8m for the pillow case.
    B. Yes, she can still make two pillow cases with measuring 5/8m and 1/8m each.
    C. No, because she has to make two pillow cases which measures 5/8 m each.
    D. No, because the measurement of the second pillow case is 1/8 m only.
45. Edoy can bike 10 1/2 km in an hour, how far can he bike in 3/4 hour?
    A. 7 7/8
    B. 8
    C. 8 1/8
    D. 8 1/4
46. A barangay captain plan to put streetlights 1/15 km apart on one side of a road 8 3/5 km long. How many streetlights will the barangay captain need?
    A. 129
    B. 130
    C. 131
    D. 132
47. Jimmy gave Michael 1/2 of his marbles and 1/2 of a marble more. If Jimmy had 7 marbles left, how many marbles did Michael get?
    A. 7
    B. 14
    C. 21
    D. 28
48. How does the product of 0.05 x 0.12 compare with the product of 0.50 x 0.12?
    A. The product of 0.05 x 0.12 is greater than the product of 0.50 x 0.12.
    B. The product of 0.05 x 0.12 is lesser than the product of 0.50 x 0.12.
    C. Their products are equal.
    D. The products are 0.006 and 0.06, respectively.
49. Which of the following is the best buy?
    A. Baby Soap A: 4 for Php 35.00
    B. Baby Soap B: 3 for Php 21.45
    C. Baby Soap C: 2 for Php 19.10
    D. Baby Soap D: 6 for 51.30
50. Which of the following fractions will result to terminating decimal?
    A. 2/3
    B. 5/6
    C. 5/8
    D. 5/11
51. Which of the following fractions will result to non-terminating decimal?
    A. 2/5
    B. 7/9
    C. 1/2
    D. 3/4
52. A shelf in a library has only math and science books. If there are 22 math books and 31 science books, write the ratio to compare the number of math books to the total number of books.
    A. 22:31
    B. 31:22
    C. 22:53
    D. 31:53

53. Partition 42 in the ratio 1:2:3.
    A. 7:14:21
    B. 6:12:18
    C. 3:6:9
    D. 1:2:3
54. A recipe uses 3 eggs for every 4 muffins. If the baker needs 72 muffins for a party, how many eggs will the baker need to use?
    A. 12
    B. 24
    C. 36
    D. 54
55. Teacher Scott sent the question "What is your favorite food?" to two classes each with 40 learners. In one class, 35% of the learners responded. In the other class, 40% of the learners responded. How many more learners responded in one class than the other class?
    A. 1
    B. 2
    C. 3
    D. 4
56. In an expression 4^2 + (8-3) x 6 ÷ 2 - 9, which should be solved first according to GEMDAS Rule?
    A. 8-3
    B. 2-9
    C. 4^2
    D. 6÷2
57. Which is greater, -3 or -1/3?
    A. 3
    B. -3
    C. 1/3
    D. -1/3
58. Which is greater, -3 or -1/3?
    A. 0
    B. -0.1
    C. 0.1
    D. 1
59. I am an integer greater than -5 but less than 5. If you divide me by -3 my quotient is positive integer. Who am I?
    A. -12
    B. -9
    C. -6
    D. -3
60. Andrea rolled a piece of rectangular paper that is 8 cm long and 6 cm wide and tape it at opposite sides. How many possible cylinders can be formed out of it?
    A. 1
    B. 2
    C. 3
    D. 4
61. Four congruent triangles are joint together to form lateral faces of a pyramid. What is the shape of the base?
    A. hexagon
    B. rectangle
    C. square
    D. triangle
62. A box contains an unknown number of black chips. Which expression represents the number of chips in this diagram?

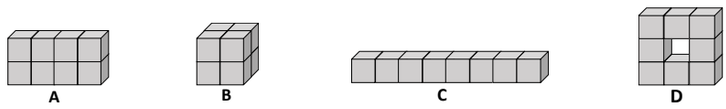


    A. m + 3
    B. m - 3
    C. m x 3
    D. m ÷ 3

63. A basketball player scored 9 points more than his teammate. What is the algebraic expression that represents his score?
    A. r + 9
    B. r9
    C. r/9
    D. r - 9
64. Thrice a number is 11 more than twice the number. Find the number.
    A. 11
    B. 22
    C. 33
    D. 66
65. Bong drives for 4 hours at 55 km/h. Billy drives 195 kilometers in 3 hours. How far would Bong travel if he drove for 4 hours at the same speed as Billy?
    A. 195 km
    B. 220 km
    C. 260 km
    D. 325 km
66. A cheetah ran 350 meters in 23 seconds. What was its average speed rounded to the nearest hundredths?
    A. 15.20 m/s
    B. 15.21 m/s
    C. 15.22 m/s
    D. 15.23 m/s
67. Find the area of the shaded region.



    A. 120 m^2
    B. 240 m^2
    C. 264 m^2
    D. 384 m^2
68. A photo of the Philippine President measuring 16 cm by 12 cm is mounted on a rectangular cardboard, leaving a margin of 2 cm all around. What area of the cardboard is not covered by the photo?
    A. 64 cm^2
    B. 128 cm^2
    C. 192 cm^2
    D. 320 cm^2
69. A chocolate company made samples of different forms of chocolate bars using 1-cm chocolate cubes. Below are the samples formed presented for approval. Which sample needs the least wrapping material?



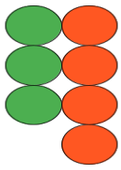
    A. A
    B. B
    C. C
    D. D

C. Information Literacy

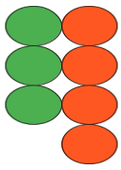
70. Cardo needs 12 2/4 liters of blue paint for the repainting of the entire perimeter fence in their house and 8 1/4 liters of green paint for the entire house wall. How many liters of paint does he need in all? How much more material does he need for the perimeter fence than the entire house wall?
    What are the steps to follow in solving the problem?
    I. Add or subtract the whole numbers.
    II. If similar, write the sum or difference over the common denominator.
    III. Compare the denominators.
    IV. Reduce the answer to the lowest term whenever possible.

    A. I, II, III, IV
    B. II, III, I, IV
    C. III, II, I, IV
    D. IV, III, II, I

71. What is the product when 2.01 is multiplied by 10.25? How will you read the product?
    A. Twenty. Six Thousand Twenty-Five
    B. Twenty and Six Thousand Twenty-Five
    C. Twenty and Six Thousand Twenty-Five thousandths
    D. Twenty and Six Thousand Twenty-Five ten thousandths
72. In a Special Education Class, there are 5 boys and 9 girls. Compare the number of girls to the number of boys.
    A. 5:9
    B. 9:5
    C. 5:14
    D. 9:14
73. Write the ratio of green balls to orange balls.



    A. 3:4
    B. 4:3
    C. 3:7
    D. 4:7
74. A ratio is a comparison of two quantities. It can be written in different forms. Which represents the correct way of writing the ratio of orange balls to the green balls?



    A. 4:3
    B. 4 to 3
    C. 4/3
    D. All of these
75. In the equation, $5^3 = 125$, what is 3?
    A. Base
    B. Exponential Expression
    C. Value
    D. Exponent
76. Sometimes, a multiplication expression uses the same factor repeatedly as in 3x3x3x3. How to write its exponential expression?
    A. 3^4
    B. 4^3
    C. 3^3
    D. 4^4
77. What is the first step in solving problem using GEMDAS rule?
    A. Addition
    B. Multiplication
    C. Subtraction
    D. Groupings
78. Which of the following real-life situations shows a good example of negative integers?
    A. Move 6 steps forward
    B. Losing weight of 2 kg
    C. Depositing Php6,500.00
    D. 16 meters above sea level
79. Which of the following situations represents +15?
    A. Spending Php15.00
    B. 15 degrees below 0
    C. 15 years ago
    D. Going 15 km upstream
80. Which of the following statements is true in comparing integers?
    A. -10 > - 6
    B. 0 < 3 units left of 0
    C. 10 units left of –15 = -25
    D. 5 units right of -2 > 2 units left of 12

81. A tent made by the Grade 6 pupils formed a triangular prism. Which figure illustrates the tent?

A. 

B. 

C. 

D. 

82. Which object represents a plane figure?
   A. globe
   B. jewelry box
   C. milk can
   D. paper

83. Which situation can be written as an equation?
   A. Five ml of vinegar plus ten ml of water makes fifteen ml of solution.
   B. Four packs of ten colored marbles minus six blue marbles
   C. Twenty sacks of rice divided by 2 farmers
   D. Twenty-six rows of five blue chairs plus sixteen white chairs

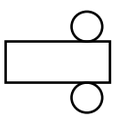
84. Which is the correct sentence for the equation m - 7 = 15?
   A. A number increased by 7 is fifteen.
   B. A number multiplied by 7 is equal to fifteen.
   C. A number divided by 7 is equal to fifteen.
   D. A number decreased by 7 is fifteen.

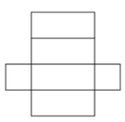
85. If 12 x 6 = n - 25, what is n?
   A. 33
   B. 47
   C. 72
   D. 97

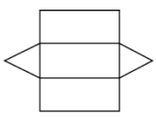
86. How long does it take a runner to run 27 kilometers at a constant speed of 9 km per hour?
   A. 2 hours
   B. 3 hours
   C. 4 hours
   D. 5 hours

87. A rectangular cloth is 35 inches long and 20 inches wide. One square cloth with a side of 14 inches will be cut from it. How much cloth will be left?
   A. 124 in^2
   B. 196 in^2
   C. 504 in^2
   D. 700 in^2

88. Shiella wants to illustrate the surface area of a rectangular prism by drawing its net. Which net should she draw?

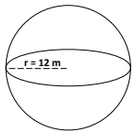
A. 

B. 

C. 

D. 

89. What is the surface area of the figure?



A. 1880.64 cm^2
B. 1880.46 cm^2
C. 1808.46 cm^2
D. 1808.64 cm^2

90. What is the surface area of a square pyramid if its side measures 12 cm and the slant height is 22 cm?

A. 276 cm^2
B. 528 cm^2
C. 672 cm^2
D. 726 cm^2

GOD BLESS!