



UNIVERSAL SUCCESS ACADEMY

20, Alani Biliaminu Street, Off Unity Estate, Iyana Iyesi, Ota, Ogun State.

admin@deusa.com.ng deusa.com.ng

07034385080, 07039092754, 08134324765



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DE UNIVERSAL MATHEMATICS GENIUS

Eliminating mathematics phobia among pupils...

3rd EDITION

INSTRUCTIONS:

1. This paper is in three sections (A, B and C)
2. You are to answer all the questions in all sections
3. **SECTION A** consists of 40 multiple-choice questions. Each question in this section is worth 1.5 marks.
4. Use HB pencil **ONLY** to shade the appropriate answer from section of the answer.
5. Below is a sample of how to shade correctly. For instance, if your answer to a question is option B the shade as indicated.
100. {A} {C} {D} {E}
6. Do not shade more than one option for each question. If you make a mistake, erase neatly with an eraser and then shade your new option.
7. **SECTION B** consists of 10 questions. This section is worth 20 marks.
8. Provide correct answers only to each questions in this section.
9. **SECTION C** consists of 2 Theory questions. Each question worth 10 marks.
10. Orderliness, neatness and clarity is encouraged.

SECTION A

(Answer all questions)

1. Joseph has 10 candies. He gave 4 candies to John and John returned 2 candies to Joseph after few days. number of candies Joseph has altogether are
 (a) 8 (b) -8 (c) 10 (d) -10

2. Ana has 4 stamps. She bought 8 stamps more and Mary borrowed two stamps from Ana. total number of stamps Ana have are
 (a) -12 (b) 12 (c) 10 (d) 8

3. On a line, the sum of adjacent angles is equal to
 (a) 90° (b) 180° (c) 140° (d) 120°

4. Angles that have common vertex and a common side on a line are classified as
 (a) vertically opposite angles (b) supplementary angles
 (c) adjacent angles (d) complementary angles

5. Angles formed when two straight lines intersect each other are classified as
 (a) adjacent angles (b) complementary angles
 (c) supplementary angles (d) vertically opposite angles

6. If Ana is x years old then 5 times Ana's age three years ago is
 (a) $3(x - 5)$ (b) $5(x - 3)$ (c) $3(x + 5)$ (d) $5(x + 3)$

7. subtract eight times of the number b from ten times of the number c is
 (a) $2bc$ (b) $8b - 10c$ (c) $8c - 10b$ (d) $10c - 8b$

8. If Hazel makes 20 garlands in 40 minutes then the number of garlands Hazel can make in 28 minutes are
 (a) 21 (b) 18 (c) 16 (d) 14

9. If 50m pipe is used during construction of bungalow and cost for every 2m pipe is \$12 then cost for 50m of pipe will be
 (a) 380 (b) 350 (c) 330 (d) 300
10. Harry bought a new digital camera for \$2000. If it captures 150 pictures in 10 minutes then the number of pictures camera can take in one second is
 (a) 0.30 pictures per second (b) 0.25 pictures per second
 (c) 0.35 pictures per second (d) 0.15 pictures per second
11. On evaluating the expression $10(x - 20y) + 100x$, the answer will be (a) $100x + 240y$ (b) $110x + 200y$ (c) $200x - 110y$ (d) $110x - 200y$
12. On the Cartesian plane, the x-axis is also known as
 (a) horizontal axis (b) vertical axis (c) point coordinate
 (d) function coordinate
13. Mary has 24 pastries and wants to share pastries with her 20 friends. greatest number of pastries any friend can get
 (a) 5 (b) 6 (c) 4 (d) 2
14. If the price of rice in 2014 is \$20/kg which was 30% more than what it was in 2010 then the price of rice per kg in 2010 was
 (a) \$16.38 (b) \$14.38 (c) \$15.38 (d) \$17
15. Antique painting appreciates each year by 13% of its value at the start of year. If painting costs \$35000 in January then the value of painting at the end of 4 years is
 (a) \$59,067 (b) \$57,067 (c) \$58,000 (d) \$58,200
16. The value of 3.95×0.18
 (a) 0.711 (b) 4.13 (c) 3.77 (d) 1.17

17. Ratio of **600ml** to **1litre** is
 (a) 3:05 (b) 2:07 (c) 3:07 (d) 4:05
18. Number of significant figures in **9.00823** are
 (a) six (b) four (c) five (d) seven
19. A closed box has internal dimensions **8 cm, 7 cm and 4.5 cm**. Its wood is 1 cm thick. Its external dimensions are
 (a) 10 cm by 9 cm by 4.5 cm (b) 10 cm by 9 cm by 5.5 cm
 (c) 9 cm by 8 cm by 5.5 cm (d) 10 cm by 9 cm by 6.5 cm
20. If $2(x - 2) = 3 + x$, $x =$
 (a) 5 (b) -1 (c) 7 (d) $7/3$
21. $(a + b) - (a - b) =$
 (a) $2a$ (b) $2b$ (c) $2a - 2b$ (d) $b - a$
22. A woman is 42 years old. Her daughter is $1/3$ of her age. 3 years ago the sum of their ages was
 (a) 62 (b) 56 (c) 50 (d) 4
23. Simplify $\frac{16ab^2c}{96} \div \frac{abc}{6}$
 (a) abc (b) $16a$ (c) a (d) b
24. In the following sequence **79, 76, 73, 70**, the next three numbers in the sequence are
 (a) 65, 62, 59 (b) 67, 64, 61. (c) 68, 65, 63. (d) 66, 63, 60
25. Ana wants to make a necklace with white, blue and red beads. ratio of white to blue beads is 2 : 3 while ratio of blue to red beads is 3 : 4. ratio of white beads to blue beads to red beads in its simplest form is
 (a) 4:03:06 (b) 2:03:04. (c) 3:04:05. (d) 6:03:06

26. If 10.15 a.m. is converted into 24-hour clock then the time notation can be written as
 (a) 35 hours (b) 20:15 (c) 10:15 (d) 15:10
27. By converting the 5.6m^2 into the cm^2 , the answer will be
 (a) 0.0056cm^2 (b) 5600cm^2 (c) 56000cm^2 (d) 560cm^2
28. The value of $6.01 - 1.06$ is
 (a) 7.07 (b) 4.95 (c) 0.495 (d) 7.70
29. Mary bought a tank whose dimensions are **5.6cm, 8.2cm and 12.8 cm.** volume of water (in cm^3) that can be stored in tank (correct up to four significant figures) is
 (a) 585.8 (b) 600.8 (c) 590.8 (d) 587.8
30. If a car arrived at 17:00 after travelling for 2 h 45 min then the time at which car started its journey is
 (a) 11:15 a.m. (b) 14:15 p.m. (c) 15:15 p.m. (d) 12:15 p.m.
31. Considering the following pattern $2 \times (2 - 1) = 2$, $3 \times (3 - 1) = 6$, $4 \times (4 - 1) = 12$, $5 \times (5 - 1) = 20$, the 8th line in the pattern will be
 (a) $9 \times (9 - 1) = 72$ (b) $8 \times (8 - 1) = 56$
 (c) $7 \times (8 - 1) = 49$ (d) $10 \times (10 - 1) = 90$
32. Least Common Multiple (LCM) of $2^2 \times 4^2$ and $2^3 \times 4^2$ is
 (a) 712 (b) 412 (c) 612 (d) 512
33. John has two beepers red and green. green beeper beeps every 35 second and red beeper beeps every 45 seconds. After how many seconds both beepers beeps at the same time?
 (a) 512 (b) 515 (c) 315 (d) 415

34. A rectangular field is **40m long** and **30m wide**. perimeter of rectangular field is

- (a) 200m (b) 180m (c) 160 (d) 140

35. Simplify: $\frac{p}{q} \times \frac{q}{d} \times \frac{d}{e} \times \left(\frac{p}{r} \times \frac{r}{e} \right)$

- (a) 1 (b) p/q (c) r (d) p^2/e^2

36. Given $x = 5$, $y = 9$, then $\frac{xy^2}{y-x}$ will give

- (a) $405/4$ (b) $10^4/5$ (c) $225/4$ (d) $405/14$

37. The value of $43 - 33 + 23 - 13$ is

- (a) 20 (b) 72 (c) 64 (d) 44

38. **30% of #150.00** is (a) #30.00 (b) #50.00 (c) #45.00 (d) #120.00

39. **3 dm 3 cm** as a decimal of **10 m** is

- (a) 0.0033 (b) 33 (c) 0.33 (d) 0.033

40. $\sqrt[3]{729} - \sqrt{16}$

- (a) 23 (b) 5 (c) 13 (d) 31

SECTION B

(Answer all questions)

1. What is the area of a rectangle **3½cm long** and **2¾cm wide**?
2. A book of **3.5 cm thick** and cover is **1.82 mm thick**. How thick is the book without its covers?
3. A dealer made a profit of **20%** by selling an article for **N84**. How much did it cost him?
4. Find the value of $(1\frac{1}{4})^4$
5. A pole is 7.8 m long. If 20% of the length is driven to the ground, what is the length of the pole that remains above the ground?

46. A dealer made a profit of 20% by selling an article for N 84. How much did it cost him?

47. Find the simple interest of N700 for $2\frac{1}{2}$ years at $5\frac{1}{7}\%$ per annum.

48. What is the value of 5 in 23 510 302 ?

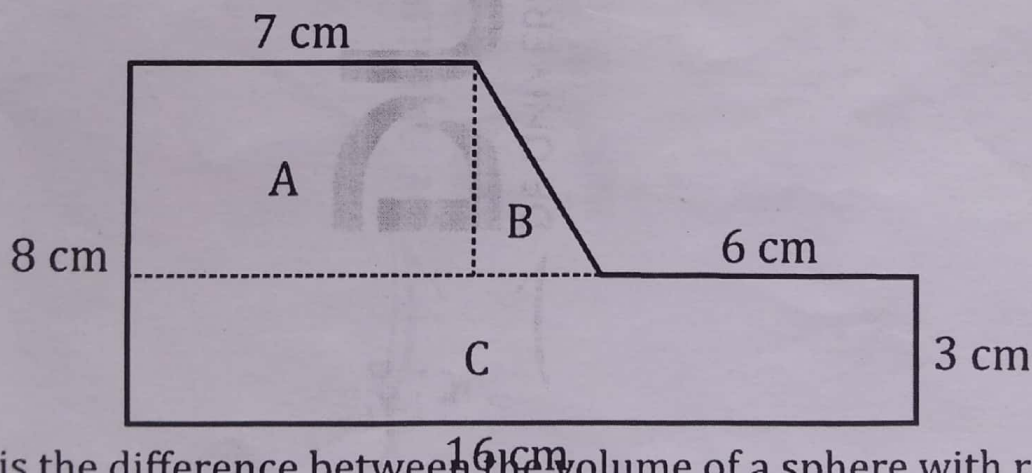
49. Find the value of $\frac{3}{14}$ of 2 kg = _____ g

50. Find the value of $\frac{63 \times 2^3}{7^3 \times 3}$

SECTION C

INSTRUCTION: There are **two (2)** questions in this section. Answer all questions, showing all your workings clearly, neatly and orderly.

1. Find the area of this figure.



2. What is the difference between the volume of a sphere with radius 14cm and the volume of a hemi-sphere that has a diameter of 14cm?