



**KITH AND KIN INTERNATIONAL COLLEGE**  
7/11 Kaoli Olusanya Street, Owode Ibeshe, Ikorodu, Lagos State.  
**FIRST TERM EXAMINATION 2025/2026 ACADEMIC SESSION**

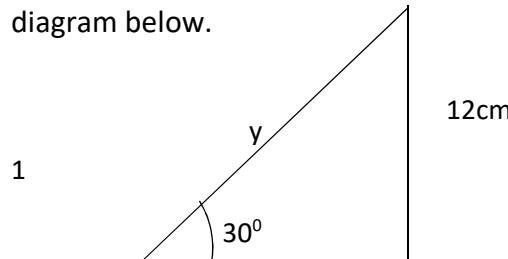
NAME					
SUBJECT	MATHEMATICS	CLASS	JSS 3	DURATION	1 1/2 HOUR

**Part A: Multiple choice (50 marks)**

Answer all questions: **Each** question is followed by **four** options lettered A to D. Find out the correct option for **each** question and **shade in pencil** on your answer space which bears the same letter as the option you have chosen. Give only **one** answer to **each** question.

1. Express 48 as a product of its prime factors.
  - $2^4 \times 3$
  - $2^3 \times 3^2$
  - $2^2 \times 3^3$
  - $2^5 \times 3$
2. Convert  $23_{10}$  to base 2.
  - $10111_2$
  - $11011_2$
  - $11101_2$
  - $10101_2$
3. Simplify:  $(3x + 2) - (x - 5)$ 
  - $2x - 3$
  - $2x + 7$
  - $3x + 7$
  - $3x - 2$
4. What is the perimeter of a rectangle with length 10 cm and width 4 cm?
  - 14 cm
  - 28 cm
  - 40 cm
  - 48 cm
5. What is the probability of rolling a number greater than 4 on a fair six-sided die?

6. Express  $341_{\text{six}}$  as a number in base 10
  - 254
  - 134
  - 133
  - 123
7. If 4 pens cost ₦800, how much will 7 pens cost?
  - ₦1200
  - ₦1400
  - ₦1600
  - ₦1800
8. A sum of ₦10,000 is invested at 5% per annum compounded annually for 2 years. What is the amount?
  - ₦10,500
  - ₦10,750
  - ₦11,025
  - ₦11,250
9. Expand  $(2x - 3)(3x + 5)$ 
  - $6x^2 + 4x + 15$
  - $6x^2 - x - 15$
  - $6x^2 + x - 15$
  - $6x^2 + 4x - 15$
10. Calculate the value of  $y$  in the diagram below.



A. 24cm  
 B. 12cm  
 C. 6cm  
 D. 3cm

11. Simplify:  $5x + (2x - y) - 4y$   
 A.  $7x - 3y$   
 B.  $7x + 3y$   
 C.  $7x - 5y$   
 D.  $7x + 5y$

12. Calculate the compound interest on N5000.00 for 2 years at 10% per annum.  
 A. N1 050.00  
 B. N1 500.00  
 C. N2 050.00  
 D. N2 500.00

13. Solve the inequality:  
 $4(2 - x) < 3(3 - 2x)$   
 A.  $x < \frac{1}{2}$   
 B.  $x < \frac{1}{2}$   
 C.  $x > \frac{1}{2}$   
 D.  $x > -\frac{1}{2}$

14. A prefect is to be selected from a class of 16 girls and 14 boys. What is the probability that the prefect is girl?  
 A.  $\frac{1}{16}$   
 B.  $\frac{7}{8}$   
 C.  $\frac{4}{15}$   
 D.  $\frac{8}{15}$

15. Simplify:  $(2\frac{3}{5} - 1\frac{2}{3}) \times \frac{5}{8}$   
 A.  $\frac{1}{12}$   
 B.  $\frac{5}{12}$   
 C.  $\frac{7}{12}$   
 D.  $\frac{11}{12}$

16. Find the HCF 90 and 300 using index notation.  
 A.  $2 \times 3 \times 5$   
 B.  $2 \times 3^2$   
 C.  $3^2 \times 5$   
 D.  $3 \times 5^2$

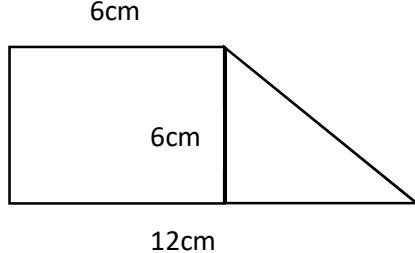
17. The plane shape with only a pair of parallel side is called?  
 A. circle  
 B. kite  
 C. trapezium  
 D. triangle

18. The sum of two numbers is 14. Five times the first number added to one-third of the second number is  
 28. Find the two numbers  
 A. 4 and 10  
 B. 5 and 9  
 C. 6 and 8  
 D. 7 and 7

19. Mohammed travels in a car from Lagos to Ibadan. His car uses 25 liters of fuel for a distance of 200 km. how many liters of fuel will be needed for a distance of 300km.  
 A. 39.5 liters  
 B. 38.5 liters  
 C. 37.5 liters  
 D. 36.5 liters

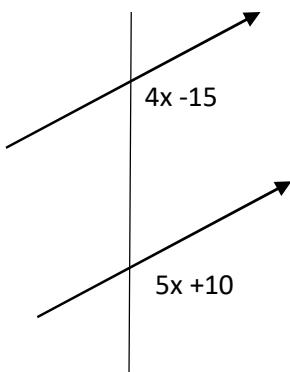
20. Find the highest common factors of  $18x^2y$ ,  $12xy$  and  $24xy^2$   
 A.  $6x^2y^2$   
 B.  $6x^2y$   
 C.  $6xy^2$   
 D.  $6xy$

21. Calculate the area of the diagram below



A.  $36\text{cm}^2$   
 B.  $48\text{cm}^2$   
 C.  $54\text{cm}^2$   
 D.  $72\text{cm}^2$

22. Find the value of  $x^0$  in the figure below



A.  $10^0$   
 B.  $15^0$   
 C.  $20^0$   
 D.  $25^0$

23. If  $x$  varies directly as  $T$  and  $x = 1000$  when  $T = 400$ , find  $x$  when  $T = 500$

A. 1250  
 B. 12500  
 C. 125000  
 D. 1250000

24. The cost of 3 kg of sugar is ₦900. What is the cost of 5 kg of sugar?

A. ₦1200  
 B. ₦1500  
 C. ₦1800  
 D. ₦2100

25. Find the simple interest of on ₦8000.00 for 3 years at  $3.5\%$  per annum

A. ₦480  
 B. ₦840  
 C. ₦4800

D. ₦8400

26. Ayo earns ₦50,000 monthly and he spends ₦35 000 altogether. If he saves the rest, find the percentage of his saving

A. 70 %  
 B. 50 %  
 C. 30 %  
 D. 15 %

27. A man can type 21 words per minute. How long will take him to types 3780 words?

A. 4 hours  
 B. 3 hours  
 C. 2 hours  
 D. 1 hour

28. Simplify:  $64^{\frac{1}{2}} \times 36^{\frac{1}{2}} \times 10^0$

A. 480  
 B. 384  
 C. 96  
 D. 48

29. A certain amount of food stuff will be consumed by 15 persons in 4 days. How long will it take if it is shared among 6 persons eating at the same rate?

A. 5 days  
 B. 10 days  
 C. 15 days  
 D. 60 days

30. Mrs. Koledowo invested ₦1 082 000.00 in 2010. Rewrite this amount correctly to the nearest million

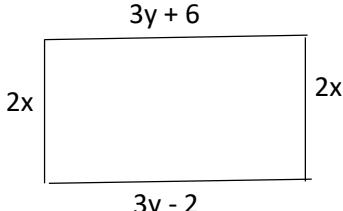
A. N2 million  
 B. N1.1 million  
 C. 1.08 million  
 D. 1 million

31. Factorize:  $x^2 + 7x + 12$

A.  $(x + 3)(x + 4)$   
 B.  $(x + 2)(x + 6)$

C.  $(x + 1)(x + 12)$   
D.  $(x + 5)(x + 2)$

32. The diagonals of a rhombus are 8cm and 10cm respectively. Find the area of rhombus.  
A.  $40\text{cm}^2$   
B.  $45\text{cm}^2$   
C.  $50\text{cm}^2$   
D.  $55\text{cm}^2$

33. The perimeter of the shape shown below is (units in cm)  


A.  $(4x + 4y)\text{ cm}$   
B.  $(4x + 6y + 4)\text{ cm}$   
C.  $(6y - 2)\text{ cm}$   
D.  $(4x + 6y - 4)\text{ cm}$

34. Correct 45 775 to 1 significant figure  
A. 50 000  
B. 5 000  
C. 500  
D. 50

35. What is the coefficient of  $x$  in  $4x^2 + 8x - 3$ ?  
A. 8  
B. 5  
C. 4  
D. -3

36. Which of the following angles **cannot** be constructed using a ruler and a pair of compasses only? \_\_\_\_  
A.  $45^\circ$   
B.  $60^\circ$   
C.  $90^\circ$   
D.  $115^\circ$

37. The surveyor bearing of  $300^\circ$  is equivalent to a compass bearing  
A.  $N 30^\circ W$   
B.  $N 60^\circ W$   
C.  $N 60^\circ W$   
D.  $N 30^\circ E$

38. Factorize  $y^2 - z^2$   
A.  $(y + z)(y - z)$   
B.  $(y - z)(y - z)$   
C.  $(y + z)(y - z)$   
D.  $(y - z)$

39. How many vertices has a cuboid?  
A. 12  
B. 10  
C. 8  
D. 6

40. Factorize:  $x^2 - 9$   
A.  $(x - 3)(x + 3)$   
B.  $(x - 3)(x - 3)$   
C.  $(x + 3)(x + 3)$   
D.  $(x - 9)(x + 1)$

41. If 6 workers can complete a job in 8 days, how many days will 4 workers take to complete the same job?  
A. 6 days  
B. 10 days  
C. 12 days  
D. 14 days

42. Two angle of a right angled triangle are  $(x + 2)^\circ$  and  $(2x + 4)^\circ$ . find the value of  $x$   
A.  $28^\circ$   
B.  $30^\circ$   
C.  $45^\circ$   
D.  $56^\circ$

43. Find the square root of 3136 in index form  
A.  $2^3 \times 7$   
B.  $3^3 \times 7$

C.  $3 \times 7$   
D.  $2^6 \times 7^2$

44. If angle A measure  $(20 - 5x)^\circ$ , the complementary angle to A measures....

A.  $70 - 5x$   
B.  $70 + 5x$   
C.  $20 - 5x$   
D.  $20 + 5x$

45. Given that  $P=4 - 9x^2$  and  $Q= 2 + 3x$ , what is  $P + Q$ ?

A.  $(6 + 9x)(x - 1)$   
B.  $(6 + 9x)(1 + x)$   
C.  $(6 + 3x)(1 - x^2)$   
D.  $(2 + 3x)(1 - x)$

46. What does the digit 9 stands for in 159.087?

A. Hundredth  
B. Tenth-  
C. Tens  
D. Unit

47. Find the product of  $1110_{\text{two}}$  and  $101_{\text{two}}$

A.  $1100100_{\text{two}}$

B.  $1000111_{\text{two}}$   
C.  $1011001_{\text{two}}$   
D.  $1000110_{\text{two}}$

48. A pair of lines which do not intersect at any point are called?

A. perpendicular  
B. parallel  
C. concurrent  
D. intersecting

49. Factorize  $6a^2 b - 13ab^2$

A.  $ab(6-13a)$   
B.  $ab(6b-13a)$   
C.  $ab(6a-13b)$   
D.  $ab(6-13b)$

50. If  $y$  varies inversely as  $x$ , and  $y = 8$  when  $x = 2$ , find  $y$  when  $x = 4$ .

A. 2  
B. 4  
C. 6  
D. 8



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## FIRST TERM EXAMINATION 2025/2026 ACADEMIC SESSION

NAME				
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### Section B

Answer any four questions {each question carries equal marks}

1. a) Convert  $101010_2$  to base five  
b) Solve the equation  $\frac{2(2y+1)}{3} = \frac{y-3}{2}$   
c) The time taken to paint a wall varies inversely as the number of painters. If 6 painters can paint it in 8 hours. How long will 12 painters take?
2. a) A motorcycle uses 15 liters of fuel for a journey of 75km. What distance will 40 liters cover by the same motorcycle?  
b) Write  $0.37373737\dots$  as rational numbers.  
c) Solve  $\frac{4x-5}{5} + \frac{3}{5} \geq 3$
3. a) Expand  $(2x + y)(3m - n)$   
b) 4 men can do a certain work for 10 days. How long would it take 8 men to do the same work?  
c) If  $y$  varies jointly as  $x$  and  $z$ , and  $y=30$  when  $x=2$ ,  $z=5$ . Find  $y$  when  $x=3$ ,  $z=4$ ?
4. a) Evaluate:  $141_6 + 233_6$  and convert the result to base 10  
b) Calculate the simple interest on N40, 000 in 4 years at  $5\%$  per annum.  
c) Factorize  $3a - cb - 3b + ac$
5. a) Evaluate:  $1110_2 \times 11_2$   
b) The circumference,  $C$  of a circle is directly proportional to its diameter,  $d$  and when  $C=66$ ,  $d= 22$ . Find the value of  $d$  when  $C= 44$ .  
c) Find the H.C.F of the algebraic expressions  $15xy^2$  and  $25x^2y$
6. a) Convert  $233_6$  to base 2  
b) Make  $u$  the subject of the formula in  
$$E = \frac{m}{2g} (v^2 - u^2)$$
  
c) Factorize the algebraic expressions:  $x^2 + 6x + 9$