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| **NAME** |  |
| **SUBJECT** |  **MATHEMATICS** | **CLASS** | **JSS 2** | **DURATION** | **2 HOUR** |

*This paper consists of Sections A and B. Section A is an Objective Test of fifty (50) questions and Section B is Theory questions consisting of Five (5) questions.*

KITH AND KIN INTERNATIONAL COLLEGE

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THIRD TERM EXAMINATION 2024/2025 ACADEMIC SESSION

 **SECTION A: OBJECTIVE TEST**

 **[50 Marks]**

*Attempt* ***all*** *question*

1. Solve the equation: $\frac{x-5}{2}=\frac{x-4}{3}$

A. 6

B. 7

C. 8

D. 9

2. I added 55 to a certain number and then divide the total by 3. The result is 4 times the first number. Find the number.

A. 11

B. 5

C. 10

D. 3

3. Solve the equation $\frac{3x}{2}-2= \frac{2x}{3}$

A. $\frac{12}{5}$

B. 3 $\frac{7}{3}$

C. $\frac{15}{4}$

D. $\frac{7}{5}$

Use information below for questions 4 to 6

There are red balls, 8 white balls and 5 blue balls in a box. I pick a ball at random from the box. Find the probability that the ball is:

4. White

A. $\frac{1}{4}$

B. $\frac{3}{5}$

C. $\frac{7}{20}$

D. $\frac{2}{5}$

5. Blue or Red

A. $\frac{1}{4}$

B. $\frac{3}{5}$

C. $\frac{7}{20}$

D. $\frac{2}{5}$

6. Neither Red nor White

A. $\frac{1}{4}$

B. $\frac{3}{5}$

C. $\frac{7}{20}$

D. $\frac{2}{5}$

7. a die has 6 faces numbered 1 to 6. On a single roll of the dice find the probability of getting the number 10

A. 1

B. 0

C. $\frac{1}{2}$

D. $\frac{3}{4}$

 8. Find the bearing of B from A

319 0 00

A. 1390

B. 2210

C. 1800

D. 3600

9. **Find** the size of angle t

41 0

t

63 0

u

A. 520

B. 1040

C. 470

D. 760

**10. The** sum of 7 of the angles of a nonagon is 10000. The other two angles are equal to each other. Calculate the size of the other two angles

A. 550

B. 1300

C. 2000

D. 1800

11. Evaluate $√12\frac{1}{4}$

A.$ 3.05$

B.$ 3 \frac{1}{2}$

C. $0.35$

D. $3 \frac{1}{4}$

12. Express 0.000 054 8 in standard form.

A. 0.548 x 105

B. 5.48 x 105

C. 5.48 x 104

D. 5.48 x 10-5

13. Deborah types 1800 words in one hour. What is her typing speed in word per minutes(wpm)

A. 35 wpm

B. $ 25wpm$

C. $ 32 wpm$

D. $ 30wpm$

14. The total number of students in a school is 875. If 350 girls, what percentage of the pupils are boys?

A. 40%

B. 45%

C. 60%

D. 35%

Use the following information to answer questions 15 ,16 and 17

If $a= 2$,$ b=-3$ and $c=4$ , then evaluate

15. $a^{2}-b+c$

A. $9$

B.$ $2

C.$ $10

D.$ $11

16.$ \frac{a^{2}+b^{2}+c^{2}}{a+b+c}$

A. $7\frac{2}{3}$

B.$ 8\frac{4}{7}$

C.$ 9\frac{4}{5}$

D.$ 9\frac{2}{3}$

17. $\sqrt{a^{2}\left(b^{2}+c^{2}\right)}$

A. 5

B. 6

C.$ $8

D.$ $10

18. Expand -4a2(4-a)

A. 16a2 – 4a3

B. -4a3 + 16a2

C. 16a2 – 4a2

D. -16a2 + 4a2

19. solve the equation 8(y+2)+5(y-3)=27

 A. -2

 B. 3

 C. 4

 D. 2

20. solve the inequality 8-3x $\leq $x-4

A. x$\geq $3

B. x$\leq $3

C. x$\geq $4

D. x$\leq $ -3

21. Three children are to share 936 biscuits in the ratio 2:3:4. How many will each received?

A. 208, 312, 416

B. 312, 206, 415

C. 176, 256, 512

D. 207,302, 416

22. Simplify $\frac{28a^{2}bc}{7ab}$

A. $4ac$

B. $7ac$

C. $7ab$

D.$ 19abc$

23. What is the least number that must be added to 19 to make it a perfect square?

A. 6

B. 8

C. 10

D. 16

O

6x

5x

4x

A

B

24.

In the diagram above, find the value of x if <AOB IS 900

A. 150

B. 360

C. 160

D. 60

25.

3x

2x

4x

The value of x in the diagram above is

A. 200

B. 100

C. 400

D. 600

26. In preparing for an examination, a student spent 18 hours in a day reading. What percentage of a full day is this?

A. 75$\%$

B. 85$\%$

C. 95$\%$

D. 65$\%$

27. Find the square root of 3136 in index form

A. 26 $×$ 72

B. 33 $× $7

C. 3 $×$ 7

D. 25 $×$ 72

28. Evaluate 15$– $3$- $($+ $17)

A. $-$5

B. 3

C. 5

D. $-$3

29. Simplify $\left(\frac{3a}{8b}\right)×\left(\frac{18b^{2}}{9a^{2}}\right)$

A. $\frac{3b}{4a}$

B. $\frac{4b}{3a}$

C. $4b$

D. $3a$

30. Solve 3$\left(4x+5\right)= -3$

A. $x=-1\frac{1}{2}$

B. $x= 2$

C. $x= -1$

D. $x= -2$

31. Solve $ \frac{2x -1 }{3}$ = 7

A. $x=11$

B. $x=8$

C. $x= 5$

D. $x=3$

33. When 6 is added to five times a certain number, the result is the same as when 3 is subtracted from seven times the number. Find the number.

A. 4$ \frac{1}{2}$

B. 4

C. 6

D. 8

34. Solve $\frac{90}{z-1}=15$

A. $z=7$

B. $z=4$

C. $z=2$

D. $z=1$

35. Solve 3 $=$ 15 $+3z$

A. $z=12$

B. $z=9$

C. $z=5$

D. $z=3$

36. The length of a rectangle is twice its width. If the perimeter is 24$cm$, calculate its area.

A. 20$ cm^{2}$

B. 25$ cm^{2}$

C. 30$ cm^{2}$

D. 32$ cm^{2}$

37. Solve 6 $-$ $3x>$ 2$-2x$

A. $x>4$

B. $x>6$

C. $x<6$

D. $ x <-40$

38. What is the value of$ z$, if 2$z-3 <21$ and $z$ is a positive even number?

A. $z<9$

B. $z>9$

C. $z >12$

D. $z<12$

39. Solve $\frac{x}{5}-\frac{x}{4} >2$

A. $x <5$

B. $x <20$

C. $ x > 40$

D. x < -40

40. A quadrilateral with just one pair of parallel sides is called \_\_\_\_\_\_\_\_\_

A. Square

B. Parallelogram

C. Kite

D. Trapezium

41. All these are properties of a rectangle except?

A. Two pairs of opposite sides are equal.

B. It has four lines of symmetry.

C. The diagonals bisect each other.

D. Each angle is equal to 90$°.$

42. What is the next three numbers in the pattern given below?

$$-15, -11, -7,-3…$$

A. $ 1, 4, 5$

B. $ 2, 3, 4$

C. $ 1, 4, 8$

D. $1, 5, 9$

43. A car dealer sold 24 cars for a total of ₦ 13 632 000. What was the average price of the cars?

A. ₦578 600

B. ₦400 405

C. ₦588 750

D. ₦568 000

44. Each exterior angle of a regular polygon is 30$°$. Find the sum of the interior angles of the polygon.

A. $900°$

B.$ 1400°$

C.$ 1500°$

D.$ 1800°$

45. Simplify the scale 5$cm$: 2$ km$

A. $1 : 5 000$

B.$ 1 : 50 000$

C.$ 1 : 400 000$

D.$ 1 : 40 000$

46. Find $x$ in the following ratio3 :5 $=x : $20

A. $x=9$

B.$ x=$ 2

C.$ x=$ 10

D.$ x=$ 12

The bar chart below shows how students in JSS 2 did in an examination. Use the bar chart to answer questions 47 to 50

47. How many students sat for the examination?

A. 160

B. 175

C. $ $200

D. $ $180

48. What fraction of people got full mark?

A. $\frac{1}{8}$

B. $\frac{5}{18}$

C. $\frac{5}{19}$

D. $\frac{17}{36}$

49. If the pass mark is 8. What percentage of the students passed the examination?

A. $60\%$

B.$ 59\%$

C.$ 47.2\%$

D.$ 50\%$

50. What is the probability of picking a letter A in the word **PATHAGORAS**?

A. $\frac{3}{8}$

B. $\frac{1}{5}$

C. $\frac{3}{10}$

D. $\frac{3}{5}$

**SECTION B: THEORY**

**[Total Marks: 40 Marks]**

 **Note**: (1) Answer any **Four (4)** questions from this section.

 (2) All questions carry **equal** marks.

 (3) Show all your workings clearly.

1a. A full tank of water last 50 students for 10 days. For how long will the same tank last 125 students?

 b. Given the polygon below

 i. Find the value of x

 ii. Find the unknown angles in the hexagon

2x

117 0

142

131 0

3x

x

 (6 marks)

2a. From the top of a building 50m high, the angle of depression of a car is 550. Find the distance of the car from the foot of the building. (6 marks)

b. the body mass of a man is x kg. The body masses of his two children are five-sixth and four-fifth that of their father. If the difference between the masses of the children is 2.3kg. Find the mass of then father (4 marks)

3a. Solve the equation $\frac{4x-3}{2} = \frac{9x-6}{8} +2\frac{3}{4} $

b. **A** tray contain 18 big-sized eggs and 12 small-sized eggs. Someone picks an egg at random. Find the probability that it is either big sized or small sized egg. (6 marks)

4a. Solve the following linear inequality in one variable and show the solution set on the number line $\frac{X+4}{3}\geq 2x-4 $ (6 marks)

b. find the sum of interior angle of a pentagon$ $ (4 marks)

5. Some student scored these grades in a test

**C, B, D, A, C, C, E ,B, D, F, B, D, E, C, A, C, D, B.**

1. Construct a frequency table for score distribution
2. Draw a bar chart to show the result in the test
3. How many students took the test?
4. What was the lowest grade?

 (2 marks)

6a. Find the missing angles in the figure below

**k 0**

r **0**

 **m 0**

40 0

**n 0**

60 0

b. Seven workers dug a piece of ground in 10 days. How long would 5 workers take do the same job?