PRECIOUS STAR EXAM SERIES

STANDARD EIGHT - YEAR 2022

{003}

MATHEMATICS

{8}

TIME: 2HRS

READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question paper and a separate answer sheet. The question paper contains 50 questions

2. Do any necessary rough work in this paper.

3. When you have chosen your answer, mark it on the **ANSWER SHEET**, not in this question paper.

HOW TO USE THE ANSWER SHEET

4. Use an ordinary pencil only.

5. Make sure that you have written on the answer sheet

YOUR INDEX NUMBER

YOUR NAME

NAME OF YOUR SCHOOL

6. By drawing a **dark line** inside the correct numbered boxes mark your full Index Number (ie. School Code Number and the three-figure Candidate's Number) in the grid near the top of the answer sheet.

7. Do not make any marks outside the boxes.

8. Keep your answer sheet as clean as possible and **DO NOT FOLD IT.**

9. For each of the Questions 1-50 four answers are given. The answers are lettered A, B, C, D in each case only **ONE** of the four answers is correct. Choose the correct answer.

10. On the answer sheet show the correct answer by drawing a dark line inside the box in which the letter you have chosen is written.

Example

In the question booklet

17. What is 6589376 to the nearest thousands.

A. 6580 000   B. 7000 000   C. 6589 000   D. 6 590 000

The correct answer is **D**

15. [A] [B] [C] [D]   **16.** [A] [B] [C] [D]   **17.** [A] (B) [C] [D]   **20.** [A] [B] [C] [D]

In the set of boxes numbered 15 the box with letter B printed in it is marked

11. Your dark line MUST BE within the box.

12. For each question ONLY ONE box is to be marked in each set of four boxes.

This question paper consists 6 pages

1. What is **two million three hundred** and **forty thousand six hundred** and **sixty two less a thousand** in symbols?
   - A. 2340662
   - B. 2339662
   - C. 2341662
   - D. 23040662

2. What is the difference between the total value of digits **4** and **2** in **84205**?
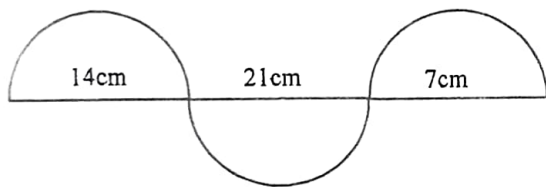   - A. 4000
   - B. 200
   - C. 3800
   - D. 4200

3. What is **699.99996** rounded off to the nearest thousandths?
   - A. 699.000
   - B. 700.000
   - C. 700
   - D. 600.000

4. What is the place value of digit **5** in **6.5 ÷ 0.13**?
   - A. Tens
   - B. Ones
   - C. Hundreds
   - D. Tenths

5.

   Calculate the total distance round this shape
   (Take $\pi = {}^{22}/_7$)
   - A. 108cm
   - B. 132cm
   - C. 66cm
   - D. 87cm

6. Three bells rang at an intervals of 30min, 40min and 50min. If they rang together at 8am in the morning, at what time will they ring together?
   - A. 6.00am
   - B. 8.10am
   - C. 8.10pm
   - D. 6.00pm
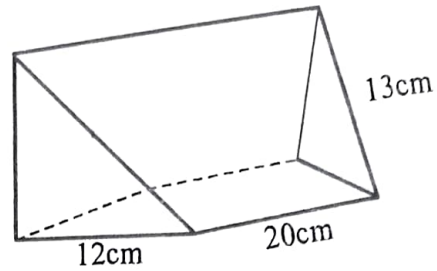
7. **What is twice the value of:-**
$$\frac{4(6^2 - 4^2) + 8 \times 3}{2 \times 2}$$
   - A. 26
   - B. 8
   - C. 52
   - D. 16

8. Which of the following measurements will form a right angled triangle?
   - A. 12cm 40cm 5cm
   - B. 40cm 25cm 15cm
   - C. 24cm 7cm 40cm
   - D. 32cm 24cm 40cm

9. What is the volume of the wedge below?

   - A. 1560cm³
   - B. 120cm²
   - C. 660cm²
   - D. 600cm²

10. A motorist covered part of his journey at a speed of 100km/hr in 2 ¹/₂ hours. She rested for 30 minutes. She then covered the rest of the journey at a speed of 75km/hr in 2 hours. What was her average speed for the whole journey?
    - A. 80km/hr
    - B. 90km/hr
    - C. 75km/hr
    - D. 87 ¹/₂ km/hr

11. What is the value of **y** in the equation?
$$\frac{{}^y/_4 + y - 3}{2} = 6$$
    - A. 10
    - B. 6
    - C. 7
    - D. 9

12. After selling an item at Sh. 6600. Amina made a profit of 10%. How much was the buying price of the item?
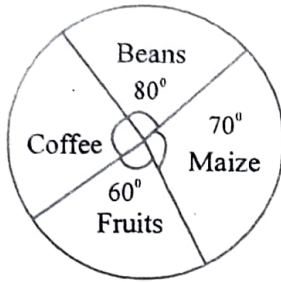   - A. Sh. 6000
    - B. Sh. 7260
    - C. Sh. 660
    - D. Sh. 5940

13. The marked price of a radio was Sh. 4800, hire purchase price was 115% of the marked price. Mary bought it on hire purchase and paid a deposit of Sh. 1600 and agreed to pay the rest in seven months. How much was each installment?
    - A. Sh. 392
    - B. Sh. 552
    - C. Sh. 560
    - D. Sh. 788

14. A sales agent is paid a basic salary of Sh. 24000 plus a commission of 4% on the value of good sold above sh. 10000. What was her total earning in a month she sold goods worth Sh. 50000?

A. Sh. 25600   B. Sh. 1600

C. Sh. 26000   D. Sh. 27000

15. The pie chart below shows how Maria uses her farm;

If the land under coffee was 30ha, how big was his farm?

A. 45ha   B. 72ha

C. 12.5ha   D. 90ha

16. The temperature of water in a fridge is 12^0c below freezing point. The water was heated till the temperature rose to 62^0c. What was the rise in temperature?

A. 50^0C B. 74^0C

C. 38^0C D. 82^0C

17. A factory packs 80 sachets of soap in a carton. One day, 120 cartons were packed. During transportation 12 cartons got destroyed. The remaining soap was shared among 8 dealers. How many sachets did each dealer receive?

A. 1200   B. 108

C. 1080   D. 8640

18. What is the value of x in:-

$$\frac{2x+2}{4} + \frac{x+2}{3} = 3$$

A. 5   B. 25

C. $2\frac{1}{5}$ D. 4

19. The floor of a room measures 12m by 9m. Square tiles of side 12cm were put to cover the floor. How many tiles were used?

A. 7500   B. 9

C. 1296   D. 108

20. Work out:-

$$5\frac{1}{9} \div 1\frac{4}{5} \times \frac{9}{25} = \underline{\hspace{2cm}}$$

A. $82\frac{4}{5}$ B. $25\frac{5}{9}$

C. $1\frac{1}{45}$ D. $\frac{2}{230}$

21. A trader borrowed some money from a bank that charged a simple interest of 18% pa. After 2 years, he repaid the money with an interest of Sh. 43200. How much money had the trader borrowed from the bank?

A. Sh. 58,752   B. Sh. 1200000

C. Sh. 48000   D. Sh. 120000

22. A section of a road 12.5km long is represented on a map by 5cm. What is the scale on the map?

A. 1:25000000   B. 5:250000

C. 1:250000   D. 5:12.5

23. Juma has a square farm with on area of 25 hectares. What is the measure of one side of the farm in metres?

A. 5000m   B. 250m

C. 1000m   D. 500m

24. A cylindrical water tank has a base area of $154cm^2$ and a height of 10cm. Water is filled into the tank to a height of 6cm. What is the volume of the tank with water?

A. $924cm^3$ B. $1540cm^3$

C. $616cm^3$ D. $2464cm^3$

25. Use the table below to answer the following question

Value of order	Commission in sh.
Upto to Sh. 500	54
501 - 1000	120
1001 - 3000	186
3001 - 5000	232
5001 - 10000	302

Jane sent Ksh. 2500 to her daughter. She also sent Sh. 5000 to her son and Sh. 500 to her grandson. How much money did she give at the post office altogether?

A. Sh. 8472   B. Sh. 8000

C. Sh. 472   D. Sh. 302

26. Construct triangle PQR such that **PQ** = 6cm, **PR** = 5cm and **RQ** = 4.5cm. What is the size of angle PRQ?
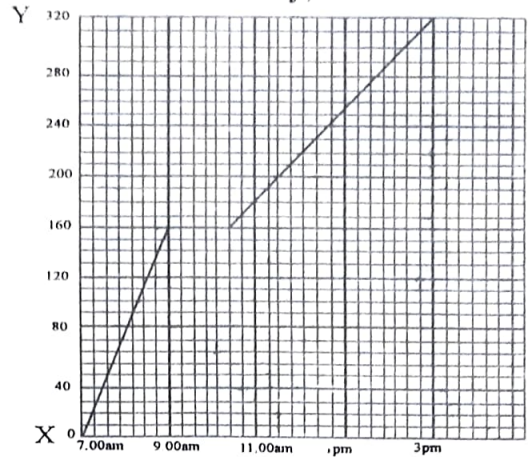
A. 54^0 B. 46^0

C. 100^0 D. 78^0

27. A certain company wanted to compare the types of vehicles commonly used along a certain street. They recorded the results in the table below; Use it to answer the question that follows;

Type	Mon	Tue	Wed	Thur	Fri
Toyota	64	58	63	42	98
Mazda	22	40	24	14	30

On which two consecutive days did they record the greatest drop in the number of Mazda vehicles?

A. Tue - Wed   B. Wed - Thur

C. Thur - Fri   D. Mon - Tue

28. The graph below shows Wamunga's journey from town **x** to town **y**;

How far from town **y** was Wamunga at 9.00am?

A. 200km   B. 230km

C. 120km   D. 160km

29. Gathirwa bought 50 mangoes at sh. 5 each, 25 pawpaws at sh. 10 each and 60 bananas for sh. 120. He paid Sh. 100 for transport. During transportation 5 pawpaws and 10 bananas got spoilt. He sold the remaining as follows. Ten mangoes for sh. 60, each pawpaw at sh. 15 and each banana at sh. 6. How much profit did he make?

A. Sh. 180   B. Sh. 900

C. Sh. 720   D. Sh. 280

30. In a class of 24 pupils, each pupil was given two - 2dl packets of milk. How many litres of milk were given out?

A. 480L   B. 960L

C. 9.6L   D. 4.8L

31. What is the next number in the following pattern? **90, 88, 85, 80, 73,** _____

A. 64   B. 65

C. 66   D. 62

32. Jayden bought the following items from a shop;
- *3loaves of bread @ sh. 50*
- *2 $\frac{1}{2}$kg of sugar @ sh. 120*
- *2 - 2kg packets of wheat flour @ sh. 130*
- *2kg cooking fat for sh. 200*

He paid with two - five hundred shilling notes. How much balance did he get?

A. Sh. 90   B. Sh. 190

C. Sh. 80   D. Sh. 180

33. Which one of the following fraction represents 62.5%?

A. $^3/_4$ B. $^4/_5$
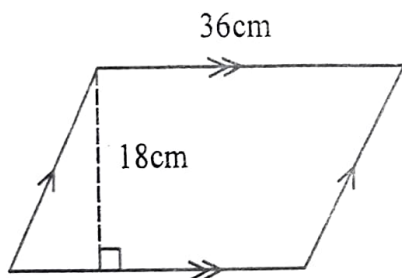
C. $^5/_8$ D. $^7/_{10}$

34. Which one of the following statements is correct?

A. $^5/_6$ is equal to 0.83

B. $^5/_6$ is greater than 0.83

C. $^5/_6$ is less than 0.83

D. 0.83 is greater than $^5/_6$

35. What is the smallest number which must be added to 363525 to make it divisibility 11?

A. 1   B. 2

C. 3   D. 4
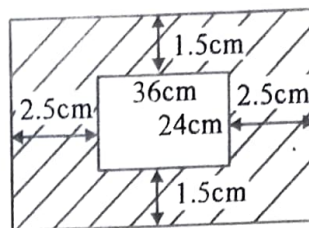
36. The diagram drawn below is a parallelogram;

36cm

18cm

What is the area of the figure?

A. 864cm²

B. 432cm²

C. 648cm²

D. 540cm²

37. A wedding ceremony was attended by 857 male adults. 1235 female adults and 3178 children. How many more children than adults attended the ceremony?

A. 2091   B. 2321

C. 1943   D. 1086

38. What is the area of the shaded region in the figure?

A. 1107cm²   B. 864cm²
C. 117.75cm²   D. 243cm²

39. A dress requires 3.75 metres of material. How many metres of material are required to make 12 such dresses?

A. 45m   B. 54m
C. 36m   D. 63m

40. What is the value of:-

$$^2/_5 + ^1/_5 (4 - 1 ^1/_2) + ^3/_4 \div ^1/_4?$$

A. 5 $^1/_{10}$ B. 3 $^9/_{10}$

C. 4 $^9/_{10}$ D. $^{15}/_{160}$

41. Temo fenced a rectangular piece of land measuring 56m by 38m. He used four strands of barbed wire leaving a space of 5m for the gate. What was the total length of the wire used?

A. 747m   B. 752m
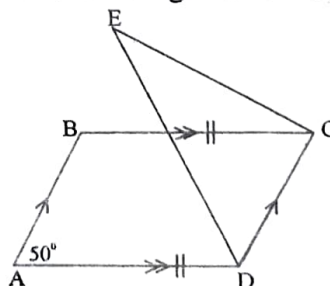B. 723m   D. 732m

42. What is the value of:-

$$\frac{3 (b + c) + b^2}{2a}$$

If a = $^1/_3$c, b = 3 and c = 2b

A. 18   B. 9
C. 15 $^3/_4$ D. 6 $^3/_4$
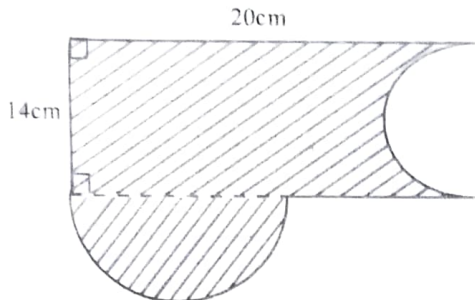
43. In the figure below **ABCD** is a parallelogram. **CDE** is an isosceles triangle. Line **DE** bisect angle **ADC** and angle **BAD** = 50°;

What is the size of angle **CED**?

A. 65°   B. 130°
C. 115°   D. 50°

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44. The shaded figure below was obtained from a rectangular piece of paper from which a semicircular piece of diameter 14cm was removed and another semicircular piece of diameter 14cm was added;

What is the perimeter of the figure?
(Take $\pi = {}^{22}/_7$)

A. 78cm   B. 84cm

C. 76cm   D. 98cm

45. The following are properties of quadrilateral figures;

    (i) Diagonals are unequal and bisect each other perpendicularly

    (ii) Diagonals do not bisect the angles

    (iii) Some angles are acute while others are obtuse

    (iv) Opposite angles are equal

    (v) Diagonals are equal but do not bisect the angles

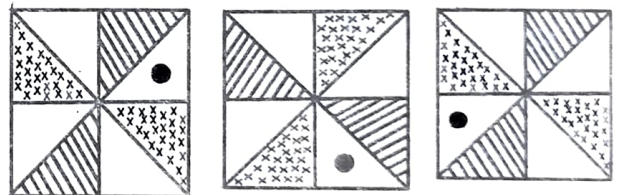Which pair of properties is true about a rhombus and a parallelogram?

A. i, iii   B. iii, iv

C. iii, v   D. ii, iv

46. A farmer had 420goats in the year 2021. This was a 40% increase from the year 2020. How many animals did the farmer have in the year 2020?

A. 300   B. 588

C. 600   D. 180

47. A watch gains 5 seconds every hour. It was set correct on Tuesday at 8.30pm. What time did it show at 8.30am the next Tuesday?

A. 8.17am   B. 8.44am

C. 8.45am   D. 8.43am

48. A pick - up was packed with cartons each containing packets of washing soap. There were packets of 1kg and 500g. The total mass of the packets was 600kg. The number of 1kg packets was 200. What was the number of 500g packets?

A. 400   B. 800

C. 200   D. 1000

49. In a certain leap year 16th January was Monday. What day of the week was 5th March the same year?

A. Monday   B. Saturday

C. Sunday   D. Friday

50. The figure below represents a pattern;

What is the next pattern?