TARGETER KCPE TRACKER
STANDARD EIGHT - 2020

MATHEMATICS
Time: 2 hours.

INSTRUCTIONS TO CANDIDATES (Please read these instructions carefully).

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

2. Do any necessary rough work in this booklet.

3. When you have chosen your answer, mark it on the **ANSWER SHEET,** not in the question booklet. · **HOW TO USE THE ANSWER SHEET.**

4. Use an ordinary pencil.

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 (i.e. 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:

    11. Find the value of 80% of 900 ÷ 0.8
        A. 576
        B. 900
        C. 5760
        D. 720

    The correct answer is B.

    On the Answer sheet:

    1 [A] [B] [C] [D]   **11** [A] [B̶] [C] [D]   **21** [A] [B] [C] [D]   **31** [A] [B] [C] [D]   **41** [A] [B] [C] [D]

    In the set of boxes number 11, 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 of 7 printed pages.

TURN OVER

1. Write nineteen million nine thousand and nineteen in symbols
A. 19900019
B. 19009019
C. 19090019
D. 1990019

2. What is the place value of digit 2 in the product of 4239 and 102?
A. Thousands.
B. Tens.
C. Hundreds.
D. Ten thousands.

3. Which is the next number in the pattern 1, 9, 25, 49, ____?
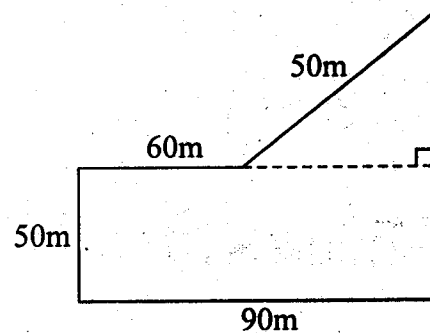A. 81
B. 121
C. 100
D. 169

4. What is the value of 18 x 6 - 106 + 288 ÷ 6?
A. 25
B. 46
C. 48
D. 50

5. A carton weighs 4kg 500g. How many such cartons will weigh 9 tonnes?
A. 500
B. 2000
C. 200
D. 5000

6. Kelly paid sh. 450 for a shirt after receiving a discount of 10%. How much would he have paid if no discount was given?
A. sh. 405
B. sh. 495
C. sh. 500
D. sh. 510

7. The base of a rectangular water tank measures 2.2m by 1.5m. Its height is 3m. How much water can it hold when full?
A. 9900L
B. 990L
C. 99L
D. 9.9L

8. The figure below represents Mutiso's piece of land

What is its area in square metres?
A. 4500
B. 1500
C. 5400
D. 5100

9. The difference in the squares of two numbers is 144. One of the numbers is 15. What is the other number?
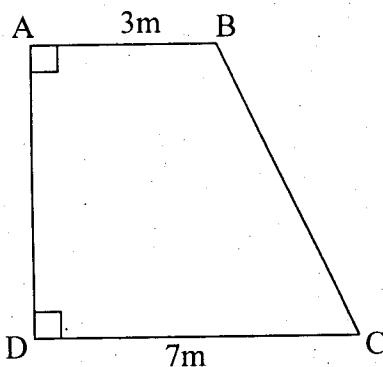A. 12
B. 9
C. 81
D. 225

10. The radius of a closed cylindrical container is 3.5cm. Its height is 6cm. Calculate its surface area
A. 132cm²
B. 264cm²
C. 170.5cm²
D. 209cm²

11. Arrange the following numbers from the smallest to the largest

5230, 5320, 5023, 5032

A. 5023, 5032, 5230, 5320

B. 5032, 5023, 5230, 5320

C. 5023, 5032, 5032, 5023

D. 5320, 5230, 5032, 5023

12. A meeting was attended by men, women and children. The number of children was half that of adults while the number of men was twice that of women. If there were 24 women, how many people were there altogether?

A. 48

B. 36

C. 72

D. 108

13. The area of a square carpet is $4m^2$. Four such carpets completely covers a square room. Calculate the perimeter of the room.

A. 16m

B. 12m

C. 8m

D. 24m

14. The area of the figure below is 30 square metres

What is the length of line AD?

A. 3m

B. 10m

C. 6m

D. 5m

15. What is the value of $2 - 1\frac{1}{4}$ of $7\frac{1}{5} \div 45$?

A. $1\frac{4}{5}$

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

C. 3

D. $3\frac{4}{5}$

16. A man bought 2 pairs of scissors at sh. 45, 4 bulbs for sh. 480 and $1\frac{1}{2}$ litres of methylated spirit at sh. 60 per litre. He paid for the items using sh. 1000 note. How much did he receive as balance?

A. sh. 660.00

B. sh. 340.00

C. sh. 330.00

D. sh. 300.00

17. Ahmed bought a typewriter on hire purchase. The deposit required was sh. 6300 followed by 6 equal monthly instalments of sh. 1200 each month. The total amount paid was sh. 2500 more than the marked price. Calculate the marked price of the typewriter.

A. sh. 12000
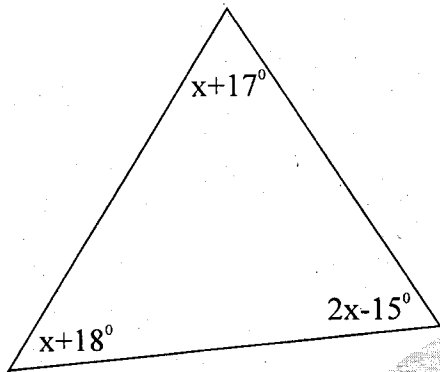
B. sh. 16000

C. sh. 13000

D. sh. 11000

18. A man shared sh. 120000 such that the elder son got $\frac{3}{8}$ while the younger received $\frac{1}{6}$. How much money was he left with?

A. sh. 50000

B. sh. 55000

C. sh. 60000

D. sh. 45000

19. A society had 3.6 hectare piece of land. 0.6 hectare of the land was set aside for construction of roads. The rest was subdivided into equal plots each measuring 60m by 50m. How many plots were obtained?

A. 10

B. 5

C. 12

D. 50

20. Work out $\dfrac{6.4 \times (3.9 \div 1.3)}{0.24}$

A. 0.8
B. 0.08
C. 80
D. 8

21. What is the size of the largest angle in the triangle below?

A. 57^0
B. 65^0
C. 58^0
D. 75^0

22. The temperature of frozen ice was -15^0C. It was heated until the temperature rose by 68^0C. What was the final temperature of the water?
A. 53^0C
B. -53^0C
C. 83^0C
D. -83^0C

23. A bus took 2hours to cover 144km. Calculate its speed in metres per second
A. 50m/s
B. 40m/s
C. 25m/s
D. 20m/s

24. Marion had sh. 40000. She deposited the whole amount in a financial institution that pays simple interest at a rate of 4% per year. Calculate the total interest the money had earned by the end of 5years?
A. sh. 48000
B. sh. 4000
C. sh. 44000
D. sh. 8000

25. If $w = 4$, $y = 9$ and $z = 7$, what is the value of $y - \dfrac{2y+z}{y-w}$?
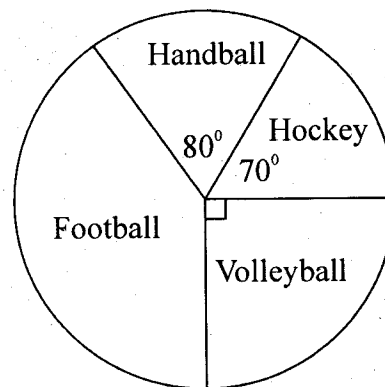
A. 9
B. 5
C. 4
D. 7

26. The area of the square formed on the hypotenuse side of a right angled triangle is 169cm². One of the shorter side is 12cm long. What is the perimeter of the triangle?
A. 30cm
B. 35cm
C. 65cm
D. 40cm

27. Round off 795.9875 to the nearest tenths.
A. 796.0000
B. 796.0
C. 795.0
D. 795.988

28. The pie chart below shows the number of pupils who participated in four games during the interschool games competition

If 24 pupils participated in football, how many pupils participated in volleyball?
A. 6
B. 12
C. 18
D. 16

29. A train took 40 seconds to pass through a tunnel. The length of the tunnel was 1.2km. What was its speed in m/s?
   A. 30m/s
   B. 15m/s
   C. 25m/s
   D. 45m/s

30. The table below shows the number of boys and girls in grades 1 to 4 in a certain school.

Grade	No. of boys	No. of girls
1	12	23
2	8	15
3	15	10
4	17	16

   What is the average number of pupils in the 4 grades?
   A. 116
   B. 28
   C. 29
   D. 26

31. What is the drawing scale in a map where 560m is represented by 7cm?
   A. 1:80
   B. 1:800
   C. 1:8
   D. 1:8000

32. Construct triangle PQR in which angle PQR = 85°, line QR = 8cm and line PR = 9.2cm. What is the length of line PQ?
   A. 6.0cm
   B. 5.5cm
   C. 4.5cm
   D. 6.5cm

33. The table below shows a plane time table from Mombasa to Kisumu through Nairobi and Eldoret.

Town	Arrival	Departure
Mombasa	—	2230hrs
Nairobi	2315hrs	2350hrs
Eldoret	0040hrs	0130hrs
Kisumu	0215hrs	—

   How long did the plane take to travel from Nairobi to Kisumu?
   A. 2hrs 25mins
   B. 3hrs 45mins
   C. 3hrs 25mins
   D. 2hrs 45mins

34. There were green and red crayons in a packet. The ratio of red to green crayons was 5:3 respectively. If there were 24 crayons altogether, how many green crayons were there?
   A. 15
   B. 9
   C. 12
   D. 40

35. A book seller bought 12 books for sh. 4800. At what price should he sell each book in order to make a profit of sh. 1200?
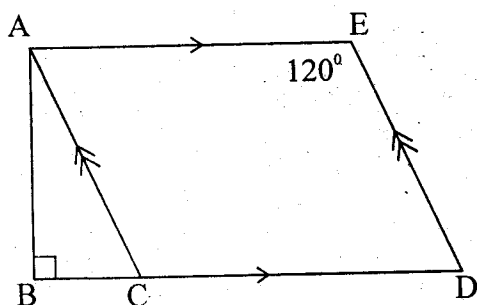   A. sh. 300.00
   B. sh. 400.00
   C. sh. 500.00
   D. sh. 450.00

36. Simplify the following

$$5(t + 2) + \frac{1}{2}(6t - 8)$$

   A. 8t + 10
   B. 8t + 6
   C. 8t - 6
   D. 8t + 14

37. In the figure below ABC is a right angled triangle, ACDE is a parallelogram and angle AED = 120°.
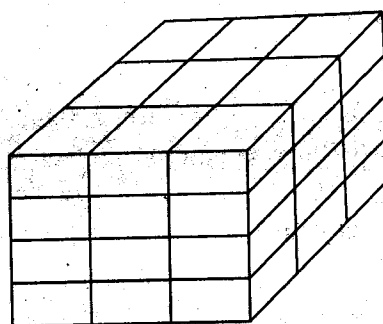

What is the size of angle BAC?

A. 120°

B. 90°

C. 60°

D. 30°

38. A man was employed by a certain company as a salesman. He was to earn a basic salary of sh. 8800. He was also to get a 15% commission on value of goods sold above sh. 120000. How much did he earn after selling goods worth sh. 160000 in one month?

A. sh. 14000

B. sh. 18000

C. sh. 14800

D. sh. 26800

39. Work out: $\sqrt{5\frac{4}{9}} \div \frac{1}{3}$

A. 7

B. $\frac{1}{6}$

C. $\frac{1}{9}$

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

40. 8 identical taps can fill a tank in 40 minutes. How many minutes will 5 such taps take to fill the same tank?

A. 25

B. 64

C. 60

D. 65

41. The stack below was dipped in white paint. It was later removed and then dismantled. How many cubes had 3 faces painted white?

A. 36

B. 8

C. 5

D. 4

42. A bus left Meru at 5.50pm on Tuesday. After travelling for 3hours 45minutes, it arrived at Embu where it stopped for 1 hour. It then continued with the journey and arrived at Nairobi at 1.35 am on Wednesday. How long did the journey from Embu to Nairobi take?

A. 3hours.

B. 3hours 15 mins

C. $3\frac{1}{2}$ hours

D. 4hours

43. Solve the value of p

$\frac{1}{3}(12p - 6) - 2p + 12 = 30$

A. 20

B. 16

C. 10

D. 8

44. Twenty pupils scored the following marks during a Continuous Assessment Test.

Number of pupils	Marks scored
1	40
4	38
3	36
2	34
3	32
7	28

What was the modal mark of the 20 pupils in the class?
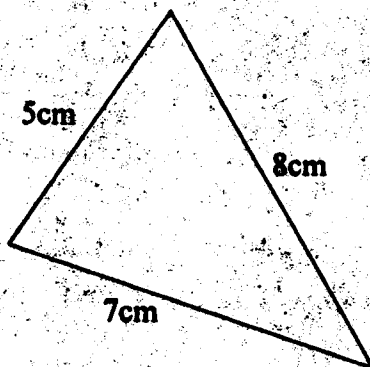
A. 40

B. 35

C. 7

D. 28

45. A cuboid measures 1m by 0.8m by 0.6. Calculate its volume in cubic centimetres.

A. 0.48

B. 480000

C. 480

D. 4800

46. Work out: $\dfrac{0.09 \times 1.2 \times 4.4}{1.1 \times 1.8 \times 2.4}$

A. 0.1

B. 1

C. 10

D. 0.01

47. The figure below represents Halima's triangular piece of land drawn using the scale 1:2000

What is its actual distance round it in metres?

A. 40000

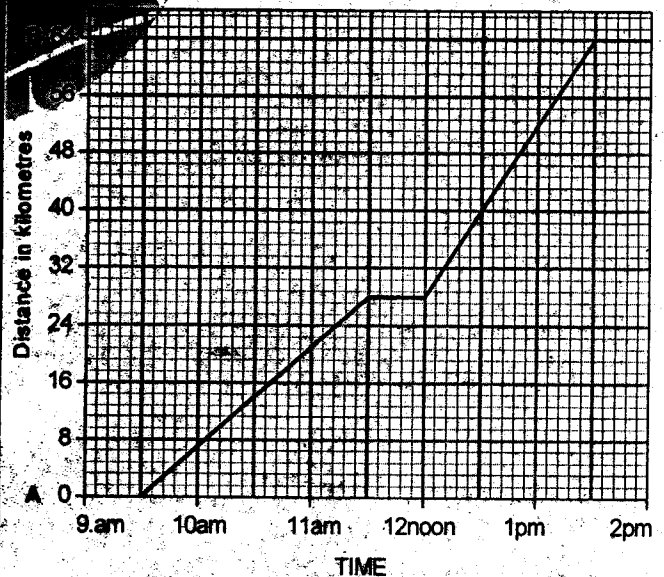B. 4000

C. 400

D. 40

48. Simplify the inequality below

$3t - 7 > t + 5$

A. t < 6

B. t > 6

C. t > 2

D. t < 2

49. The price of a coat was reduced by sh. 80. This represents 20% of its marked price. What was the marked price of the coat?

A. sh. 400

B. sh. 160

C. sh. 16

D. sh. 4000

50. The graph below show the journey followed by a cyclist travelling from point A to B.

Calculate his average speed for the whole journey

A. 64km/h

B. 12km/h

C. 8km/h

D. 16km/h