

STANDARD 8 MATHEMATICS

MID-TERM 1 2020

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:

31. Find the sum of the next two numbers in the series below

20, 24, 33, 49, _____, _____

A. 110

B. 36

C. 74

D. 184

The correct answer is **D**.

On the Answer sheet:

[A] [B] [C] [D] [A] [B] [C] [D] [A] [B] [C] [D] [A] [B] [C] [D] [A] [B] [C] [D]

In the set of boxes number 31, the box with letter **D** printed in it is marked.

1. What is the number 640678.16 written in words?
- Six hundred and forty thousand six hundred and seventy eight point one six.
 - Six hundred and forty thousand six hundred and seventy eight decimal one six.
 - Six hundred and forty thousand six hundred and seventy eight and sixteen hundredths.
 - Six million four hundred and six thousand six hundred and seventy eight and sixteen thousandths.

2. Which of the following statement is incorrect?

- $\frac{3}{4} < \frac{4}{5}$
- $\frac{5}{6} > 0.83$
- $\frac{2}{3} < 0.66$
- $\frac{1}{3} > 0.3$

3. What is the smallest six digit number can be obtained when the digits in the number 760824 are rearranged?

- 204678
- 876420
- 024678
- 240678

4. What is the value of $\frac{2}{5} + \frac{1}{2}$ of $\left(\frac{5}{6} - \frac{3}{4}\right) \div \frac{1}{8}$?

- $\frac{4}{5}$
- $\frac{11}{15}$
- $\frac{4}{15}$
- $\frac{3}{5}$

5. During an election, candidate R got 1206 votes more than candidate S who got 808 votes more than candidate T. Candidate S and T got a total of 5604 votes. How many votes did candidate R get?

- 4412
- 2398
- 3206
- 4796

6. What is the value of $4.3334 + 195.6665$ rounded off to the nearest thousandths?

- 199.9999
- 199.000
- 200
- 200.000

7. Milk was stored in containers of 36 litres, 30 litres and 24 litres. The milk in each container was repacked into smaller containers of the same size. What was the largest capacity of the container used to repack the milk?

- 360L
- 12L
- 6L
- 240L

8. What is the square root of the number obtained when 144 is multiplied by 9?

- 108
- 36
- 4
- 15

9. What is the next number in the pattern

$$\frac{2}{3}, \frac{5}{6}, 1, 1\frac{1}{6}, \underline{\quad}?$$

- $2\frac{1}{3}$
- $1\frac{5}{6}$
- $1\frac{1}{3}$
- $1\frac{2}{3}$

10. Amina sold $\frac{1}{3}$ of her goats to a butcher and gave $\frac{1}{6}$ of the remaining goats to her children. If she was left with 90 goats, how many goats had she at the beginning?

A. 162
B. 203
C. 180
D. 40

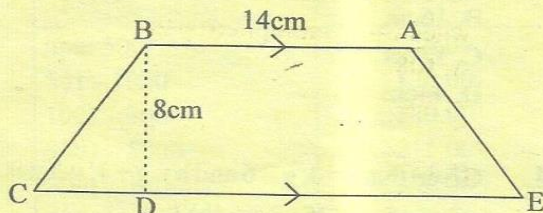
11. What is the value of $\frac{4 - (2.4 + 1.2)}{2} + 2$?

A. 0.4
B. 3.4
C. 1.2
D. 2.2

12. The perimeter of a square of sides 44cm is equal to the circumference of a circle. What is the radius of the circle?

A. 14cm
B. 56cm
C. 7cm
D. 28cm

13. The area of the trapezium ABCDE is 136cm^2 .
AB = 14cm and BD = 8cm.



What is the length of CE?

A. 34cm
B. 17cm
C. 20cm
D. 48cm

14. A flower garden is in the form of a rectangle and two semicircles. The rectangle is 20m long and 14m wide. The widths of the rectangle are also the diameter of the two semicircles. What is the area of the garden?

A. 154m^2
B. 434m^2
C. 280m^2
D. 896m^2

15. A cylindrical container has an internal radius of 7cm and a height of 12cm. What is its capacity in litres?

A. 1.848
B. 1848
C. 0.528
D. 682

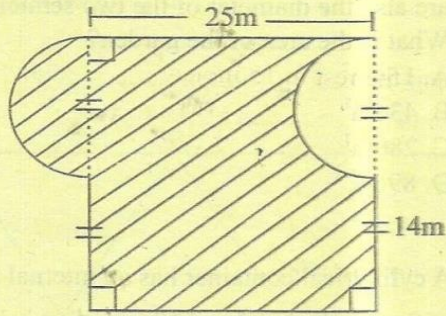
16. A carton is packed with 20 packets each weighing 500g. A pick up was loaded with 200 such cartons. What was the total load in tonnes?

A. 2000000
B. 20000
C. 2000
D. 2

17. A cyclist left home at 9.25am and took 1hr 40 minutes to travel to town. He stayed there for 1 hour before he cycled back. The time he took to travel back was 20 minutes more than he had taken to travel to town. At what time did he reach home?

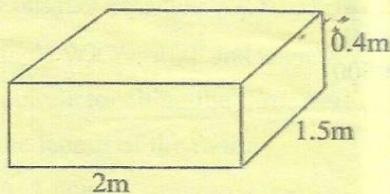
A. 1.25pm
B. 3.05pm
C. 11.05pm
D. 2.05pm

18. The diagram below represent a piece of land



What is the perimeter of the piece of land?

- A. 94m
 B. 122m
 C. 108m
 D. 97m
19. What is the volume of the solid below in cm^3 ?



- A. 1.2
 B. 120000
 C. 1200000
 D. 12000
20. A motorist covered part of his journey at a speed of 60km/h for $2\frac{1}{2}$ hours. He then increased his speed to 80km/h and covered the remaining part for $1\frac{1}{2}$ hours. What distance did he cover?
- A. 270km
 B. 150km
 C. 120km
 D. 560km

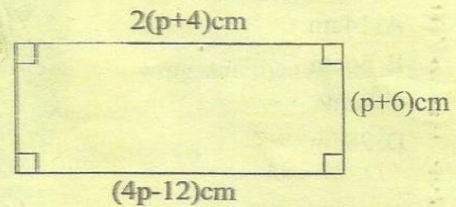
21. A cylindrical rod has a diameter of 14cm and a height of 10cm . What is its total surface area?

- A. 594cm^2
 B. 748cm^2
 C. 440cm^2
 D. 308cm^2

22. In a farm there are 36 chickens. In a week 16 of them lay k eggs and the rest lay $k + 2$ eggs. How many eggs are laid together in a week?

- A. $(17k + 2)$ eggs
 B. $(20k + 40)$ eggs
 C. $(36k + 20)$ eggs
 D. $(36k + 40)$ eggs

23. The figure below is a rectangle



How longer is the length than the width in cm ?

- A. 28cm
 B. 16cm
 C. 12cm
 D. 44cm
24. Given that $f=4$, $g=6$ and $h=g+1$, what is the value of $\frac{1}{2}(2f+3g+4h)$?
- A. 54
 B. 27
 C. 26
 D. 13
25. What is the value of x in the equation $4x - 8 = 2x + 20$?
- A. 14
 B. 28
 C. 2
 D. 6

26. What is $3(m + \frac{1}{3}) + \frac{1}{5}(10m - 15)$ in simplest form?
 A. $5m + 2$
 B. $5m - 2$
 C. $m + 4$
 D. $5m + 4$

27. Chacha paid sh. 1800 for a wrist watch after being allowed a discount of sh. 200. What was the discount as percentage?
 A. $11\frac{1}{9}\%$
 B. 90%
 C. 10%
 D. $12\frac{1}{2}\%$

28. A trader deposited sh. 10000 in a bank that paid a simple interest at a rate of 2% per month. How much money was in her account after 1 year?
 A. sh. 12400
 B. sh. 10200
 C. sh. 2400
 D. sh. 200

32. The table below shows commission for sending money orders.

Value of order (sh)	Ordinary commission (sh)	Express money order commission(sh)
upto 500	50.00	80.00
501 - 1000	120.00	150.00
1001 - 3000	180.00	210.00
3001 - 5000	215.00	240.00
5001 - 10000	300.00	320.00
10001 - 20000	450.00	510.00
20001 - 30000	620.00	660.00

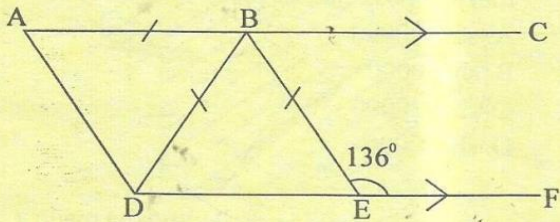
- Moraa sent one ordinary money order worth sh. 12000 and one express money order worth sh. 21500. How much did she pay altogether at the post office?
 A. sh. 1110
 B. sh. 34610
 C. sh. 34460
 D. sh. 33500

29. The cash price of a motorbike is sh. 100000. The hire purchase price of the same motorbike is 20% more than the cash price. Muturi bought it on hire purchase term and paid a deposit and the rest in 15 months each 6000. How much deposit had he paid?
 A. sh. 120000
 B. sh. 90000
 C. sh. 220000
 D. sh. 30000

30. By selling a dress at sh. 2400 Asha made a profit of 20%. How much was the buying price?
 A. sh. 3000
 B. sh. 2000
 C. sh. 2880
 D. sh. 1920

31. A sales agent sold 20 radius each sh. 1000 and received a commission of sh. 1200. What was his percentage commission?
 A. 6%
 B. 60%
 C. 12%
 D. 5%

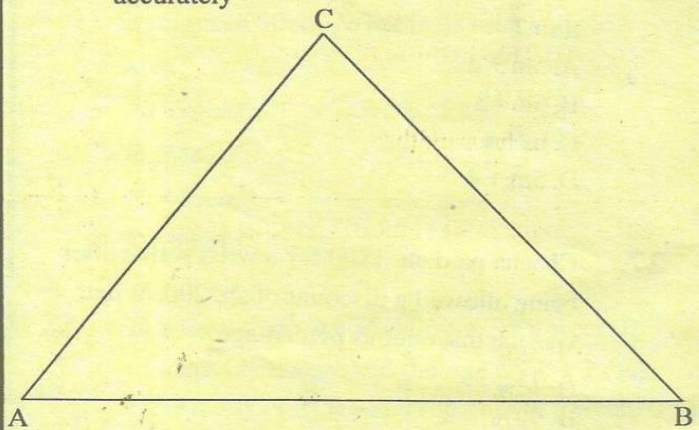
33. In the figure below line ABC is parallel to line DEF, lines BD and BE are transversals. Angle BEF = 136° .



What is the size of angle BAD?

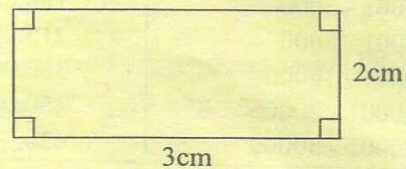
- A. 88°
 B. 92°
 C. 44°
 D. 68°
34. Construct a triangle WXY such that $WX = 7.5\text{cm}$, angle $WXY = 100^\circ$ and angle $XWY = 30^\circ$. Draw a circle touching the three vertices. What is the length of the radius?
- A. 1.6cm
 B. 3.2cm
 C. 4.8cm
 D. 2.4cm
35. Which of the following statement is true about quadrilaterals?
- A. A rectangle is a square.
 B. A parallelogram is a rectangle.
 C. A square is a special trapezium.
 D. A rhombus is a parallelogram.

36. The following triangle has been drawn accurately



What is the supplement of angle ACB?

- A. 86°
 B. 99°
 C. 106°
 D. 81°
37. Which of the following statement is not true about a closed cube?
- A. Faces + vertices = 16
 B. Edges = 12
 C. Vertices + edges = 20
 D. Edges + faces = 18
38. The figure below represent a rectangular piece of land drawn using the scale 1:2000



What is the area of the land in ares?

- A. 2400
 B. 24000000
 C. 24
 D. 0.24

39. What is the place value of digit 3 in $24.12 \div 4$?
- A. Tens.
B. Hundredths.
C. 0.03
D. Thousandths.

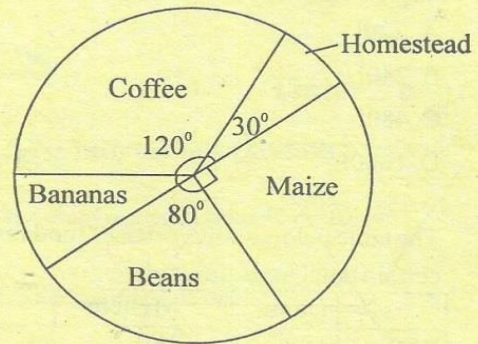
40. What is the value of $\sqrt{380 + 14^2}$?
- A. 394
B. 26
C. 576
D. 24

41. The temperature of water was 26°C . The water was heated for $\frac{1}{4}$ hour. If it was gaining heat at a rate of 4°C per minute, what was the new temperature?
- A. 27°C
B. 86°C
C. 34°C
D. 42°C

42. In a school the ratio of boys to girls is 3:2 respectively. If there are 120 more boys than girls, how many girls are there?
- A. 360
B. 600
C. 240
D. 80

43. A piece of work can be done by 16 people in 8 days. How many more days can the work take if it is done by 4 people?
- A. 32
B. 24
C. 8
D. 2

44. The pie chart below shows how a farmer uses his piece of land



If the piece of land under bananas is 2ha, how many more hectares are under coffee than maize?

- A. 6ha
B. 10.5ha
C. 4.5ha
D. 1.5ha

45. The table below shows the speed and time taken to cover a certain distance. Complete the table by calculating the values of x and y.

Speed(km/h)	120	x	180
Time (h)	3	4	y

- A. $x = 160, y = 6$
B. $x = 100, y = 6$
C. $x = 90, y = 2$
D. $x = 140, y = 2$

46. The table below shows how 60 pupils scored in a test

Score (%)	100	96	92	86	82	78	76	74	70
No. of pupils	4	7	3	11	13	10	9	2	1

What was the modal score?

- A. 82
B. 13
C. 86
D. 11

47. A tank had 1200 litres of water. If 40% of the water was used up in one week, how much water was left in the tank?

A. 720L
 B. 240L
 C. 480L
 D. 1680L

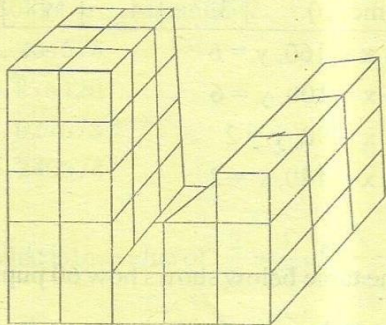
48. The table below shows price of food for a certain hotel in shillings

	Ugali	Mchele	Chapati
Beef	120	180	200
Samaki	150	200	240
Kuku	200	240	260

Six people took lunch in the hotel as follows: 2 took beef and chapati, 3 took samaki and ugali and the rest kuku and mchele. How much did they pay altogether?

A. sh. 1330
 B. sh. 850
 C. sh. 1090
 D. sh. 1200

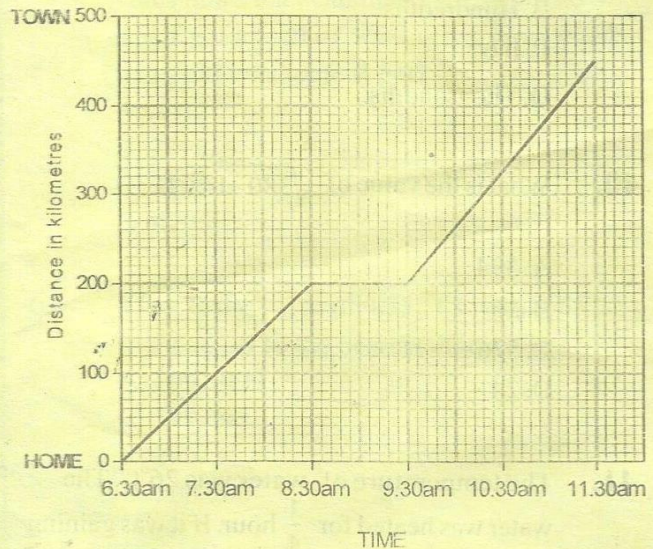
49. The stack below is made of cubes.



How many cubes are used to make the stack?

A. 75
 B. 45
 C. 27
 D. 48

50. The graph below shows a motorist's journey from home to a town.



What was the average speed in km/h for the whole journey?

A. 100
 B. 80
 C. 90
 D. $112\frac{1}{2}$