

ACHIEVERS FOCUS EXAMINATION SERIES



STANDARD 8 – 2020

MATHEMATICS

AF0048N

Time: 2 hours

READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question booklet and separate answer sheet. The question booklet contains 50 questions.
2. Do any necessary rough work on this booklet.
3. When you have chosen your answer, mark it on the **answer sheet**, not in this question booklet.

HOW TO USE THE ANSWER SHEET

4. Use only an ordinary pencil.
5. Make sure 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 the sheet as clean as possible and not fold it.
9. For each of the questions 1 – 50 four answers are given. The answers are lettered A, B, C and D. in each case only **one** of the four answers is correct. Choose the correct answer.
10. On the answer sheet the correct answer is to be shown by drawing a **dark line** inside the box in which the letter you have chosen is written.

Example

In the Question Booklet:

11. What is the value of $\frac{6(24-18)+6 \times 4}{6}$

- A. 30
- B. 25
- C. 10
- D. 28

The correct answer is C (10)

On the Answer Sheet:

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

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.

Website: www.achieversfocus.co.ke

Email: wegopublish@gmail.com

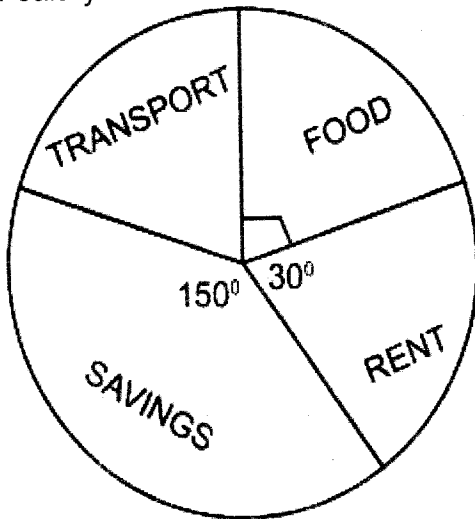
1. What is 71717717 written in words?
- Seven hundred and seventeen thousand one hundred and seventeen
 - Seven million seven hundred and seventeen thousand seven hundred and seventeen
 - Seventeen million seven hundred and seventeen thousand seven hundred and seventeen
 - Seventy-one million seven hundred and seventeen thousand seven hundred and seventeen
2. What is $\frac{1}{3}, \frac{2}{7}, \frac{5}{8}, \frac{3}{5}$ arranged in an ascending order?
- $\frac{3}{5}, \frac{5}{8}, \frac{2}{7}, \frac{1}{3}$
 - $\frac{2}{7}, \frac{1}{3}, \frac{3}{5}, \frac{5}{8}$
 - $\frac{1}{3}, \frac{5}{8}, \frac{2}{7}, \frac{3}{5}$
 - $\frac{5}{8}, \frac{3}{5}, \frac{1}{3}, \frac{2}{7}$
3. A school received 18 tonnes of rice from a well-wisher. It put 13000 kg aside for future use, 1507 kg was given to the subordinate staff while the rest was sold to raise money for others use. What mass in tonnes was sold?
- 3.493
 - 34.93
 - 349.3
 - 3493
4. A closed cylindrical tank was painted on the outside. Its diameter was 2.8 m while its height was 3.5 m. What area of the tank was painted? (Take $\pi = \frac{22}{7}$)
- 6.16 m³
 - 12.32 m³
 - 43.12 m³
 - 18.48 m³
5. Three men clear a large farm in 12 days. How many fewer days will 8 such men take to clear the same farm?
- 7½
 - 3
 - 32
 - 2
6. What is the value of?
- $$\frac{2}{7} + \frac{4}{5} \div \frac{1}{10} - \frac{3}{8} \text{ of } \frac{1}{6}$$
- $7\frac{1}{6}$
 - $8\frac{25}{112}$
 - $16\frac{1}{18}$
 - $8\frac{1}{8}$
7. A cylindrical tank of radius 3.5 m and a height of 7.2 m is filled with water. How many litres of water can it hold when completely full? (Take $\pi = \frac{22}{7}$)
- 277.2
 - 2772
 - 27720
 - 277200
8. At the start of a rainy season, a fish pond had 17306 fingerlings. During the dry season the owner sold 7348 of them. He then added 11691 other fish. What population of fish did the farmer have before the start of another rainy season?
- 9958
 - 11451
 - 21649
 - 14301

9. A certain quadrilateral has the following properties:
- It is a four-sided figure
 - Two of its sides are parallel but not equal.
 - One of its sides is sometimes perpendicular to two parallel sides.
 - The sum of its interior angles is 360° .

What quadrilateral is being described above?

- Square
- Trapezium
- Parallelogram
- Rhombus

10. The pie chart below shows how Janet spent her salary



If she earns sh.108,000, how much goes to transport?

- Sh. 27,000
- Sh. 2,700
- Sh. 1,080
- Sh. 10,800

11. Lamech's farm is 13.95 ha. He divided the farm into 0.225 ha plots. If two permanent houses were to be built on each plot, how many houses would be built?

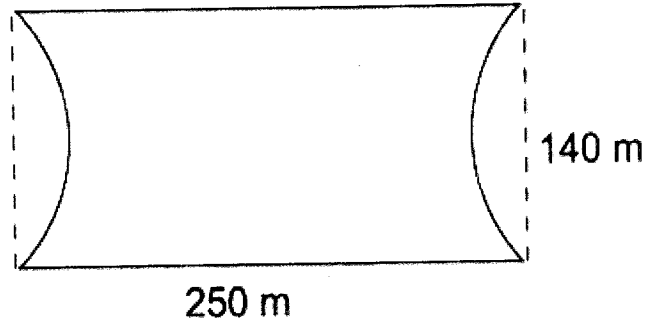
- 14
- 62
- 124
- 31

12. What is the value of:
 $2484 \div 12 + 18(36 - 15)$?

- 752
- 1428
- 4662
- 585

13. The figure below represents a garage. Take

$$\pi = \frac{22}{7}$$



What distance can be covered round the garage five and half times?

- 5170 m
- 10340 m
- 780 m
- 6100 m

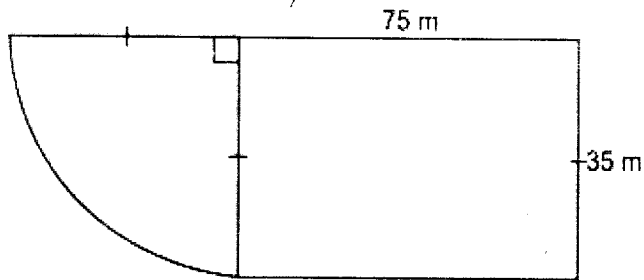
14. The NYS bus can transport 58 trainees in a single trip. In an ordinary day the bus makes 3 trips. If each trainee pays sh.30 per trip, how much money is collected in the month of August?

- 161,820
- 156,600
- 161,280
- 160,600

15. Construct a rhombus A B C D such that line AB = 6.8 cm and angle ADC = 135°
 What is the measure of the line AC?

- 6.25 cm
- 5.1 cm
- 10 cm
- 12.5 cm

16. The diagram below represents a quarry area. (Take $\pi = 3\frac{1}{7}$)



Calculate the area of the quarry in Ares.

- A. 358.75
 B. 71.75
 C. 35.875
 D. 143.5
17. At an eye clinic $\frac{7}{12}$ of those who attended were women, $\frac{1}{3}$ of the remainder were men and the rest were children. What fraction of attendants were children?
- A. $\frac{5}{36}$
 B. $\frac{5}{18}$
 C. $\frac{13}{18}$
 D. $\frac{5}{12}$
18. Find the value of p in the equation:
 $6(p + 11 + \frac{1}{3}p + 3) = 112$
- A. $3\frac{1}{2}$
 B. $2\frac{1}{2}$
 C. $7\frac{3}{4}$
 D. 7
19. What is the difference between the LCM and HCF of the numbers 15, 20 and 35?
- A. 420
 B. 425
 C. 400
 D. 415

20. Work out the value of $\sqrt{2209 - 33^2}$

A. 39
 B. 14
 C. 47
 D. 27

21. The perimeter of a square plot of land is 352 meters. Calculate the area of the plot of land in square meters.

A. 8888
 B. 7744
 C. 6754
 D. 7272

22. A rectangular container measures 400 cm by 300 cm by 5 m. Amu filled the container with 0.05 m long ice cubes. How many such ice cubes were filled half-way full?

A. 360,000
 B. 480,000
 C. 240,000
 D. 120,000

23. Romario bought the following items from a supermarket:

4 kg rice @ sh.115

10 litre can of cooking oil for sh.1335

$3\frac{1}{2}$ kg of meat at sh.408 per kilo.

5 packets of matches @ sh.60

He paid for the items using 4 – one thousand shilling notes. How much would he add the cashier in order to get a balance of sh.500?

A. Sh. 77
 B. Sh. 23
 C. Sh. 477
 D. Sh. 400

24. What is the value of?

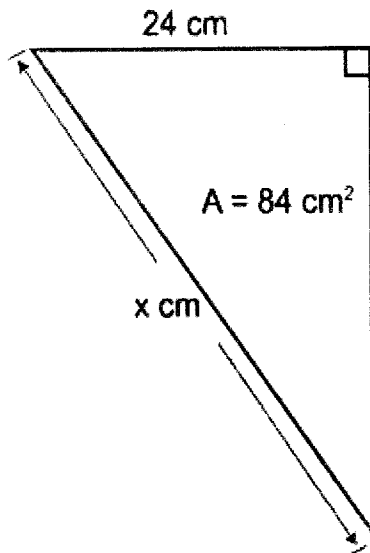
$$m(n^2 + p) - \frac{1}{3}m$$

when $m=1$, $n=2$, $p=3$

A. $6\frac{1}{3}$
 B. $4\frac{1}{3}$
 C. $7\frac{1}{3}$
 D. $6\frac{2}{3}$

25. Susan was admitted in a hospital on Tuesday at 11.50 pm. She was discharged after a total of 14 hours 10 minutes. On what day and time in 12-hour clock system was she discharged?
- Tuesday 2.00 am
 - Tuesday 2.00 pm
 - Wednesday 2.00 am
 - Wednesday 2.00 pm

26. Find the value of the side marked x in the figure shown



- 25
 - 7
 - 12
 - 16
27. Wang'ombe bought a cow for sh. 68,000 after being allowed a discount of 15%. How much would have been the discount had he bought the cow for sh. 34,000?
- Sh. 14,000
 - Sh. 18,000
 - Sh. 24,000
 - Sh. 12,000
28. Work out the product of the next two numbers in the sequence below:
5, 8, 13, 21, 35, __, __
- 714
 - 1870
 - 3548
 - 4895

29. A sales girl earns a basic salary of sh. 15,000 a month. She is also paid 3% commission on all goods sold above sh. 80,000. In one month, she sold goods worth sh. 150,000. What was her total earnings that month?
- Sh. 70,000
 - Sh. 17,100
 - Sh. 18,100
 - Sh. 2,100

30. Three candidates, Ogega, Tabitha and Rosalia stood for an election. Ogega got 0.18 of the votes, Tabitha got 0.34 while Rosalia got $\frac{2}{3}$ of the remaining votes. What fraction of the votes were spoilt?

- $\frac{4}{25}$
- $\frac{6}{25}$
- $\frac{1}{8}$
- $\frac{2}{5}$

31. Find the product of 6.425 and 1.08 and round off the result to 2 decimal places.
- 6.939
 - 6.91
 - 6.93
 - 6.94

32. What is $\frac{1}{8}(2x + 12) + \frac{1}{2}(x - 7)$ when simplified?

- $\frac{3}{4}x + 8$
- $\frac{3}{4}x + 12$
- $\frac{3}{4}x - 8$
- $\frac{3}{4}x - 2$

33. The cash price of a sewing machine was sh.9200. Fenah bought it on hire purchase terms by paying $\frac{2}{5}$ of the cash price as a deposit and ten equal monthly instalments of sh.1300. How much more did she pay for the sewing machine than the cash price?

- A. Sh. 16,680
- B. Sh. 7,480
- C. Sh. 13,000
- D. Sh. 3,680

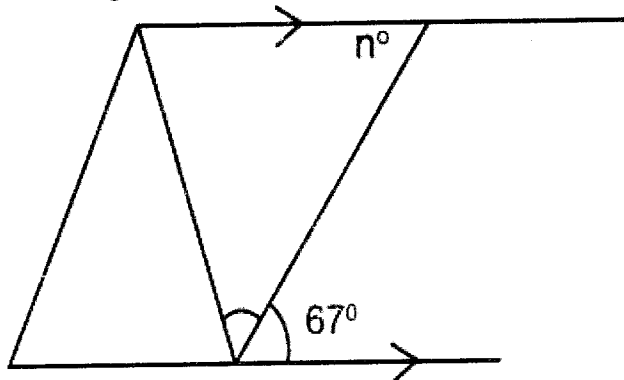
34. Nyamatoriro borrowed sh.500,000 from STIMA SACCO that charged simple interest at the rate of 5% p.a. how much did she pay back after $2\frac{1}{2}$ years?

- A. Sh. 62,500
- B. Sh. 437,500
- C. Sh. 800,000
- D. Sh. 562,500

35. The average age of 10 people is 17 years. Nine of them are aged as follows; 14, 15, 16, 17, 18, 14, 13, 18 and 17. What is the age of the tenth person?

- A. 24
- B. 28
- C. 19
- D. 21

36. What is the size of the angle marked n in the figure below?

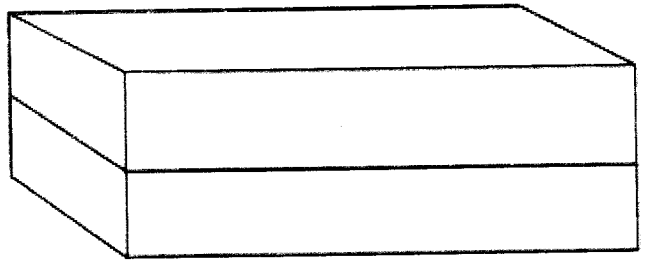


- A. 90°
- B. 67°
- C. 31°
- D. 76°

37. What is the value of digit 4 in $55.36 \div 4$?

- A. Four hundredths
- B. Eight hundredths
- C. Tenths
- D. Hundredths

38. The figure below represents two blocks of wood glued together.



If the structure was painted on all sides except the bottom, how many faces should not have been painted?

- A. 1
- B. 2
- C. 3
- D. 4

39. Alice filled a rectangular container whose measures were 3.6 m by 2 m by 3 m high quarter way with water. How many litres of water did she fill?

- A. 54,000
- B. 540
- C. 54
- D. 5,400

40. Work out the ratio in its simplest form:
50 meters to 1250 cm

- A. 1:4
- B. 3:4
- C. 4:3
- D. 4:1

41. What is the expression written in the simplest form?

$$\frac{6(p + 3r) + p}{4(2r + p) - r}$$

- A. $\frac{7p+3r}{p-7r}$
- B. $\frac{4p+2r}{3r+2p}$
- C. $\frac{12p+18r}{4r+4p}$
- D. $\frac{7p+18r}{4p+7r}$

42. Construct a triangle XYZ in which XY = 7.2 cm, YZ = 5.8 cm and ZX = 6.2 cm. What is the size of the angle XYZ?

- A. 125°
- B. 75°
- C. 55°
- D. 50°

43. Wahome had sh. 24,000 in his bank. He spent $\frac{1}{3}$ of it on school fees, $\frac{1}{2}$ of the remainder on food and put the rest on business. How much money was spent on food?

- A. 14000
- B. 8000
- C. 16000
- D. 7000

44. Oyoo bought five trays of eggs @ sh.200. All the eggs in one tray broke and he sold the remaining trays @ sh.210. What percentage loss did he make?

- A. 5%
- B. 84%
- C. $19\frac{1}{21}\%$
- D. 16%

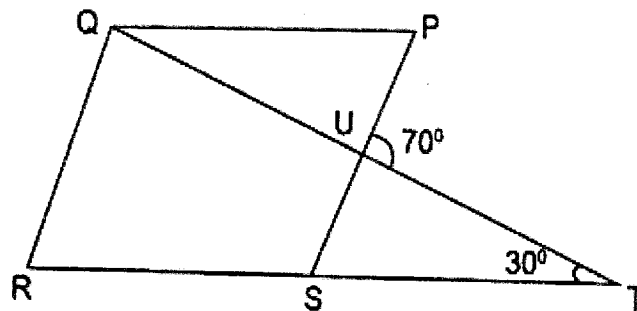
45. The level of water in the container was 1000 litres. Each day it rained the level increased by 5%. What was the level of water by the third day?

- A. 1157.625
- B. 1102.5
- C. 1050
- D. 1255

46. A train left town M at 9.30 pm and arrived at town K at 5 am the following day. How long did it take to travel from M to K?

- A. 7 hrs 30 mins
- B. 7 hrs 15 mins
- C. 7 hrs
- D. 8 hrs 15 mins

47. The figure PQRS shown is a parallelogram. Line RST is a straight line. Angle STU = 30° and angle TUP = 70° .



What is the size of the angle TQR?

- A. 140°
- B. 110°
- C. 40°
- D. 30°

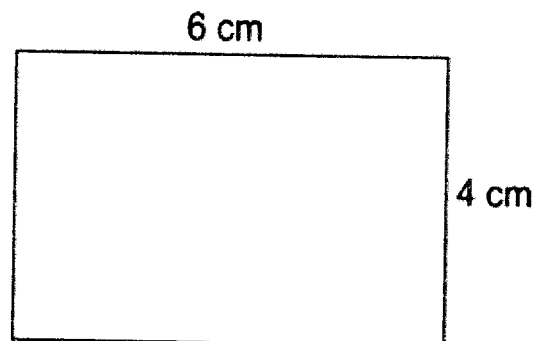
48. The table below shows the number of candidates who sat for K.C.P.E in the years 2008 and 2009.

Gender	2008	2009
Girls	328652	345454
Boys	367125	381600

How many more candidates sat for the examination in 2009 than 2008?

- A. 74619
- B. 31277
- C. 16802
- D. 14475

49. The figure below represents a rectangular plot of land drawn to scale 1:1000.



What is the actual area of the land in hectares?

- A. 2400
- B. 24
- C. 2.4
- D. 0.24

50. A car travelled 216 km at an average speed of 48 km/hr. On the return journey the average speed increased to 72 km/hr. Calculate the average speed of the whole journey in km/hr.
- A. 57.6
 - B. 60
 - C. 28.8
 - D. 68.6