

# STANDARD 7 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 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. Solve the inequality below.  $\frac{2}{3} + \frac{1}{4}x < \frac{1}{4}x + \frac{1}{2}$

A.  $3\frac{1}{3} > x$

B.  $x < 3\frac{1}{3}$

C.  $x = 3\frac{1}{3}$

D.  $1\frac{1}{9} > x$

The correct answer is D.

On the Answer sheet:

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

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

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

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

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

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



1. Write 3003003 in words.
- Three hundred thousand three thousand and three.
  - Three million three thousand and three.
  - Three million three hundred thousand and three.
  - Three million twenty thousand and three.
2. What is the place value of digit 2 obtained after working out  $0.963 \div 0.3$ ?
- Tenths
  - Hundredths
  - Tens
  - Thousandths
3. What is the value of  $160 + 40 \div 5 \times 2$ ?
- 80
  - 164
  - 176
  - 40
4. What is the value of  $\frac{0.9 \times 2.4}{0.3 \times 0.4}$ ?
- 1.8
  - 180
  - 0.18
  - 18
5. What is the value of  $60072 \div 12$ ?
- 5006
  - 56
  - 506
  - 50006
6. A man spent  $\frac{1}{4}$  of his salary on school fee,  $\frac{1}{6}$  on food,  $\frac{1}{8}$  on clothing and saved the rest. What fraction of his salary did he save?
- $\frac{13}{24}$
  - $\frac{11}{24}$
  - $\frac{5}{12}$
  - $\frac{7}{12}$
7. Arrange the fractions  $\frac{3}{8}, \frac{2}{3}, \frac{1}{4}$  and  $\frac{1}{6}$  from the smallest to the largest.
- $\frac{2}{3}, \frac{3}{8}, \frac{1}{4}, \frac{1}{6}$
  - $\frac{2}{3}, \frac{1}{4}, \frac{1}{6}, \frac{3}{8}$
  - $\frac{3}{8}, \frac{1}{6}, \frac{1}{4}, \frac{2}{3}$
  - $\frac{1}{6}, \frac{1}{4}, \frac{3}{8}, \frac{2}{3}$
8. Which is the difference between the LCM and the GCD of 8, 16 and 24?
- 48
  - 8
  - 40
  - 56
9. What is the least number that should be added to 6945 to make it divisible by 11?
- 4
  - 6
  - 5
  - 7
10. Work out  $16.24 \times 0.03$  and give your answer to three decimal places.
- 0.4872
  - 0.487
  - 0.480
  - 0.48
11. A meeting was attended by 389 members. At the end each member was given shs. 850 for lunch and fare. How much money were they given altogether?
- 330650
  - 5057071
  - 33065
  - 1239



12. Which of the following statement is correct?

- A.  $\frac{1}{2}$  of 28 <  $\frac{1}{2}$  of 14
- B.  $0.75 > \frac{3}{4}$
- C.  $60\% = \frac{3}{5}$
- D.  $0.8 = \frac{3}{8}$

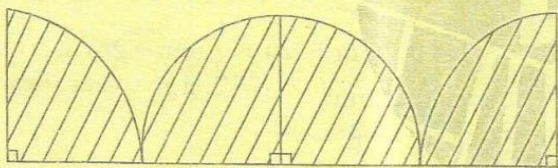
13. What is the next two numbers in the pattern?

- 1, 4, 9, 16, 25, \_\_\_\_\_, \_\_\_\_\_
- A. 36, 64
  - B. 36, 49
  - C. 49, 64
  - D. 64, 81

14. What is the value of  $\sqrt{12.25}$  ?

- A. 3.5
- B. 0.35
- C. 35
- D. 0.035

15. The following figure is made of four quarter circles each of radius 7cm.



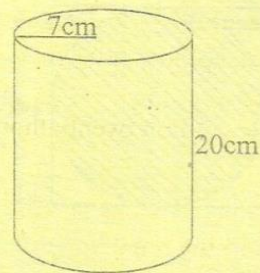
What is the area of the figure?

- A.  $38.5\text{cm}^2$
- B.  $77\text{cm}^2$
- C.  $154\text{cm}^2$
- D.  $308\text{cm}^2$

16. The perimeter of a rectangular flower garden is 72m. The width is 10m. What is the length?

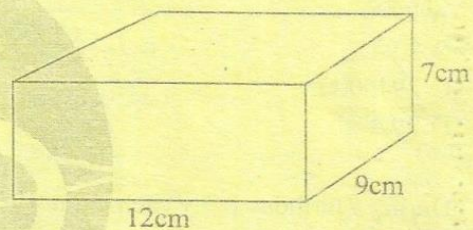
- A. 20m
- B. 62m
- C. 52m
- D. 26m

17. A cylindrical tin has a radius of 7cm and a height of 20cm. What is the area of the curved surface?



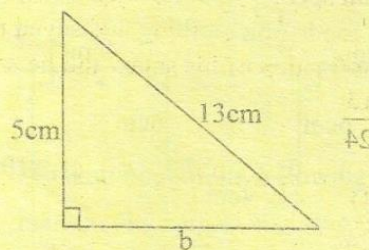
- A.  $880\text{cm}^2$
- B.  $1188\text{cm}^2$
- C.  $1034\text{cm}^2$
- D.  $308\text{cm}^2$

18. The following figure is a cuboid 12cm long, 9cm wide and 7cm high. What is the area of the cross-section?



- A.  $108\text{cm}^2$
- B.  $84\text{cm}^2$
- C.  $756\text{cm}^2$
- D.  $73\text{cm}^2$

19. Below is a right angled triangle.

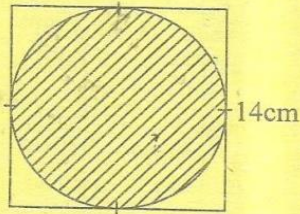


What is the length of the base (b)?

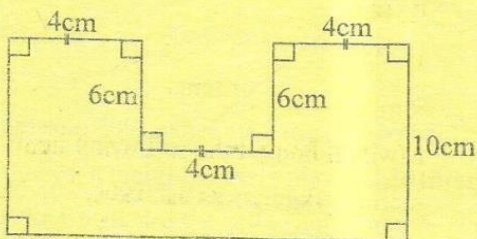
- A. 17cm
- B. 16cm
- C. 18cm
- D. 12cm



20. What is the area of the unshaded part in the figure below?



- A.  $196\text{cm}^2$   
 B.  $154\text{cm}^2$   
 C.  $42\text{cm}^2$   
 D.  $350\text{cm}^2$
21. A pick up was loaded with 12 sacks of cabbages each 70kg, 20bags of beans each 90kg and 15 cartons of cooking fat each 20kg. What was the total load in tonnes?  
 A. 2940  
 B. 2.94  
 C. 2940000  
 D. 29.4
22. During a birthday party each child was given 3dl of juice. If they took a total of 12 litres, how many children were there?  
 A. 4  
 B. 360  
 C. 3.6  
 D. 40
23. What is the perimeter of the figure below?



- A. 34cm  
 B. 44cm  
 C. 56cm  
 D. 46cm

24. A meeting started at 9.45a.m. After 3 hours, they went for a break of 1 hour and then took  $1\frac{1}{2}$  hour before it ended. At what time did the meeting end?  
 A. 1515h  
 B. 12.45a.m.  
 C. 3.15a.m.  
 D. 1415h

25. A motorist covered a distance at a speed of 80km/hr in 180 minutes. What was the distance in km?  
 A. 14400km/hr  
 B.  $2\frac{1}{4}$  km/hr  
 C. 320km  
 D. 240km

26. What is the value of  $p$  in  $3(4p + 2) - 2p = 46$ ?  
 A. 2  
 B. 6  
 C.  $4\frac{1}{5}$   
 D.  $5\frac{1}{5}$

27. What is  $2(6m + 2n) + \frac{1}{2}(6m + 2n)$  in simplest form?  
 A.  $15m + 5n$   
 B.  $15m + 4n$   
 C.  $15n + 5m$   
 D.  $15n + 4m$

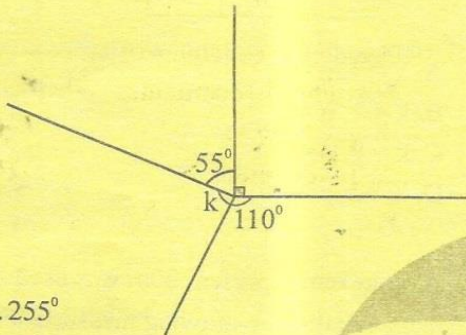
28. Peter gets shs.  $x$  each morning and shs.  $y$  each afternoon. He works for 6 days a week. If he spends shs.  $w$  for transport each week, how much is he left with?  
 A. sh( $6x + 6y$ )  
 B. sh( $6x + 6y - w$ )  
 C. sh( $6x + 6y + w$ )  
 D. sh( $x + y - w$ )



29. If  $6p = 48$ , what is  $11p$ ?

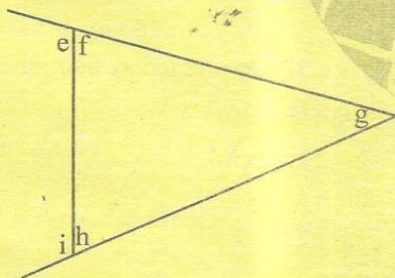
- A. 88
- B. 8
- C. 66
- D. 5

30. What is the size of angle  $k$  in the figure below?



- A.  $255^\circ$
- B.  $95^\circ$
- C.  $105^\circ$
- D.  $115^\circ$

31. The figure below is a triangle.



Angle \_\_\_\_\_ and \_\_\_\_\_ are co-interior angles opposite, and the sum of which is equal to angle  $i$ .

- A.  $e$  and  $f$
- B.  $h$  and  $g$
- C.  $f$  and  $h$
- D.  $f$  and  $g$

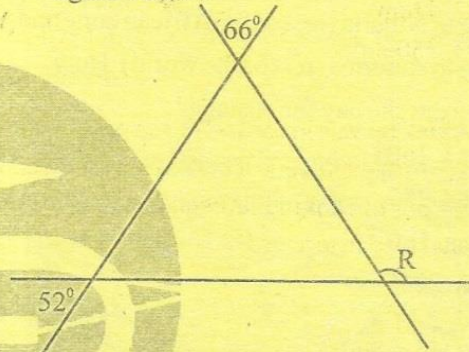
32. Using a ruler and a protractor draw triangle ABC such that line  $AB = 7\text{cm}$ , angle  $ABC = 85^\circ$  and angle  $BAC = 30^\circ$ . What is the measure of angle  $ACB$ ?

- A.  $115^\circ$
- B.  $65^\circ$
- C.  $55^\circ$
- D.  $125^\circ$

33. Which of the following shows the number of faces, edges and vertices in an open cuboid?

	Faces	Edges	Vertices
A.	6	12	8
B.	5	8	12
C.	5	12	8
D.	12	8	5

34. What is the size of angle marked  $R$  in the figure below?



- A.  $62^\circ$
- B.  $128^\circ$
- C.  $52^\circ$
- D.  $118^\circ$

35. Obiero bought two shirts each at shs. 400. He later sold them at each shs. 500. What was his percentage profit?

- A. 25%
- B. 20%
- C. 80%
- D. 75%

36. Mwikali bought the following items from a market. 4kg carrots each shs. 30, 2kg of onions @ shs. 70,  $\frac{1}{2}$ kg of ginger for shs.120. If she gave out a shs. 500 note, how much balance did she receive?

- A. shs. 120
- B. shs. 380
- C. shs. 320
- D. shs. 180



37. The table below shows international postal charges for small packets.

Small Packets (maximum weight 1kg)	Weight step	Countries within East African zone		Rest of African zone		Rest of the world	
		sh	ct	sh	ct	sh	ct
	Upto 100g	40	00	45	00	60	00
	Over 100g upto 250g	60	00	70	00	90	00
	Over 250g upto 500g	100	00	120	00	60	00
	Over 500g upto 1kg	160	00	180	00	250	00

Wanjiku posted two small packets weighing 180g to Nigeria (rest of the African zone) and 300g to America (rest of the world). How much did she pay for postage?

- A. shs. 150  
B. shs. 280  
C. shs. 160  
D. shs. 230

38. The charges of sending a telegram were shs. 10 for the first ten words or less, sh. 1 for every word after 10 words and an additional 18% of the total. How much did Musa pay for the below telegram?

PAULO CHACHA BOX 234 MOMBASA  
COME HOME GRADUATION SOON  
MUSA.

- A. shs. 10  
B. shs. 10.80  
C. shs. 11.80  
D. shs. 1.80

39. Akinyi sold 70% of her milk to a hotel owner and the rest to neighbours. If she had 120 litres, how much milk did she sell to neighbour?

- A. 36L  
B. 84L  
C. 50L  
D. 74L

40. The table below is a magic square. What is the value of  $k$  and  $p$ ?

8	$k$	
	5	7
4	$p$	2

- A.  $k = 1, p = 8$   
B.  $k = 1, p = 9$   
C.  $k = 9, p = 1$   
D.  $k = 2, p = 10$

41. A scale 1cm represent 20m was used in a map. What is the drawing measurement of a path 380m in a village?

- A. 1.9cm  
B. 190cm  
C. 19cm  
D. 19m

42. What is 0.125 expressed as fraction in simplest form?

- A.  $\frac{5}{40}$   
B.  $\frac{125}{1000}$   
C.  $\frac{1}{4}$   
D.  $\frac{1}{8}$

43. Ambati bought 90 pineapples.  $\frac{1}{6}$  of the pineapples were bad. How many pineapples were good?

- A. 15  
B. 75  
C. 30  
D. 60



44. Fill in the blank space in the table below.

Length	Width	Height	Volume
12cm		6cm	$720\text{cm}^3$

45. The table below shows how 5 pupils scored in a test.

Pupils	Thomas	Ali	Akinyi	Kyalo	Koech
Score (%)	72	78	68	82	90

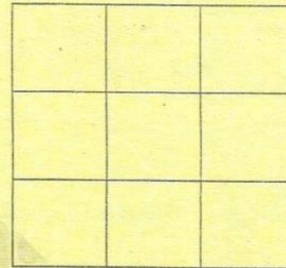
46. What is the total value of digit 7 in the number 2173405?

47. My stride is  $\frac{5}{6}$  of a metre. How many strides will I take to cover 60m?

48. Fill in the blank space in the table below.

Distance	Time	Speed
180km	2h	

49. How many squares are there in the figure below?



50. What is the next shape in the pattern?

