

---

**STANDARD EIGHT MID-TERM 3  
EXAMS**

**2016  
MATHEMATICS**

Coordinated by KENPRO,  
Macjo Arcade, 4th Floor, Suite 15E,  
Off Magadi Road, Ongata Rongai |Tel: +254202319748 |  
E-mail:infosnkenya@gmail.com | Website:[www.schoolsnetkenya.com](http://www.schoolsnetkenya.com)

**READ THESE INSTRUCTIONS CAREFULLY**

1. You have been given this question booklet and a separate answer sheet. The question booklet contains 90 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 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 (i.e.) School Code Number and the three - figure Candidates 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- 90 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:**

8. Simplify the expression  
 $2(4x - 3) - 3(2x + 6)$   
 A.  $14x + 24$   
 B.  $2x + 24$   
 C.  $14x - 24$   
 D.  $2x - 24$

The correct answer is D.

**On the Answer Sheet:**

8. [A] [B] [C] [D] 9. [A] [B] [C] [D] 10. [A] [B] [C] [D]

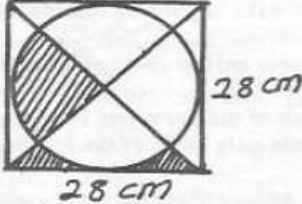
In the set of boxes number 38, the box with letter B printed in it is marked.

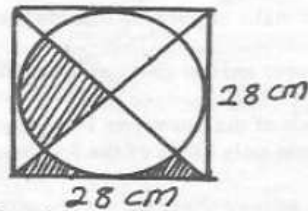
11. Your dark line **MUST BE** within the box.
12. For each question **ONLY ONE** box is to be marked in each set of four boxes.

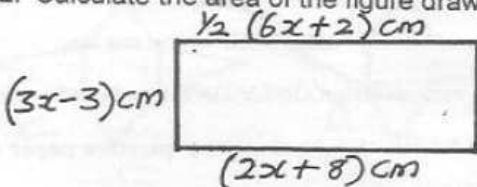
Candidates should check the question paper to ensure that all the pages are printed

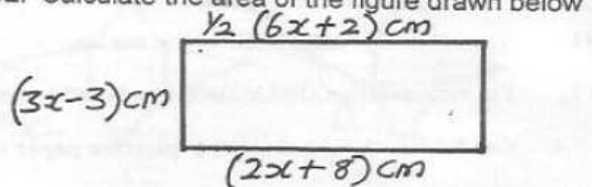
TURN OVER

- Which one of the following is 6060606.006?
  - Six million sixty thousand and six and six hundredth.
  - Six million, sixty thousand, six hundred and six and six thousandths
  - Six million sixty thousand and six and six thousandths
  - Six million six hundred and six thousand and six hundredths
- What is the total value of digit 2 in the result of  $4824 \div 4$ ?
  - 200
  - 1000
  - 20
  - 2000
- Which digit is in the place value of thousandths after working out the product of 15.373 and 0.46?
  - 1
  - 7
  - 5
  - 0
- What is the smallest number which must be subtracted from 4623 so that it is divisible by 11?
  - 4
  - 3
  - 2
  - 1
- What is the value of  $0.204 \div (0.02 \times 0.17)$ ?
  - 60
  - 0.06
  - 0.6
  - 6
- What is half the value of:  $3\frac{2}{5} - 2\frac{1}{4} \times 1\frac{1}{3} + \frac{1}{6}$  of  $1\frac{5}{7}$ ?
  - $\frac{12}{35}$
  - $\frac{4}{35}$
  - $\frac{24}{35}$
  - $1\frac{13}{35}$
- Which of the following number is exactly divisible by 24, 36 and 48 without a remainder in each case?
  - 72
  - 144
  - 108
  - 12

- How many days are there between 11th June and 11th October?
  - 122
  - 120
  - 121
  - 123
- Joy read  $\frac{3}{5}$  of a story book Monday,  $\frac{3}{4}$  of the remainder on Tuesday and the rest on Wednesday. If she read 30 pages on Wednesday, how many pages were they altogether?
  - 300
  - 210
  - 360
  - 200
- The diagram below represents a circle inscribed in a square of sides 28 cm. What is the area of the unshaded part?
 



- $616 \text{ cm}^2$
  - $588 \text{ cm}^2$
  - $784 \text{ cm}^2$
  - $196 \text{ cm}^2$
- What is the sum of the 6th and 7th number in the pattern 16, 36, 64, \_\_\_\_, \_\_\_\_?
    - 352
    - 452
    - 350
    - 256
  - Calculate the area of the figure drawn below
 



STD 8 MATHS

- A. 216 cm
- B. 90 cm<sup>2</sup>
- C. 216 cm<sup>2</sup>
- D. 60 cm

13. What is the square root of  $\sqrt{256}$  ?

- A. 16
- B. 2
- C. 4
- D. 15

14. What is the value of:

$$\frac{v^2(xw^2 - y^2)}{v x^2 + w^2}$$

where  $v = 2$ ,  $w = 4$

$x = 5$   $y = 6$

- A.  $2\frac{3}{4}$
- B. 2
- C.  $2\frac{3}{5}$
- D. 4

15. Atieno bought the following items from a shop:

2 bars of soap @ Sh. 38

2 kg packet of rice for Sh. 149

3 kg of sugar @ Sh. 68

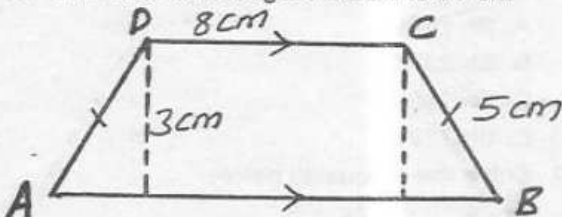
250g of tea leaves for Sh. 85

1 kg of cooking fat for Sh. 109

She paid for the items using two 500 shillings notes. How much balances did she receive?

- A. 377
- B. 551
- C. 623
- D. 228

16. The area of the figure below is 36 cm<sup>2</sup>



Calculate the distance AB

- A. 8 cm
- B. 16 cm
- C. 4 cm
- D. 18 cm

17. Construct triangle PQR such that line QR = 8 cm, angle PQR = 45° and the RPQ = 55°. What is the length of line PQ?

- A. 6.8 cm
- B. 13.7 cm
- C. 6.6 cm
- D. 9.6 cm

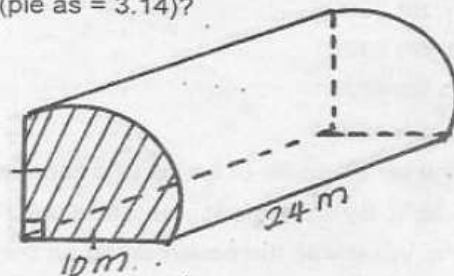
18. A map of a square plot of land is drawn to scale 1: 250. If the plot of land measures 6 cm. Find the actual area in square metres?

- A. 15
- B. 225
- C. 0.0225
- D. 22 500

19. A farmer bought 37.5 kg of rice. He packed the rice into  $\frac{3}{4}$  kg packets. How many packets did he obtain?

- A. 5000
- B. 500
- C. 50
- D. 5

20. What is the volume of the solid shown below (pie as = 3.14)?



- A. 1884m<sup>3</sup>
- B. 314 m<sup>3</sup>
- C. 78.5 m<sup>3</sup>
- D. 736 m<sup>3</sup>

21. What is the value of x in ?

$$\frac{3x + 5}{4} - \frac{x - 3}{3} = 6$$

- A. 9
- B.  $13\frac{4}{5}$
- C. 3
- D.  $7\frac{2}{3}$



22. What is the surface area of a pipe whose diameter is 28 cm and the height is 56 cm?

- A. 6160 cm<sup>2</sup>
- B. 5544 cm<sup>2</sup>
- C. 4928 cm<sup>2</sup>
- D. 34496 cm<sup>2</sup>

23. Mkulima bought four bags of potatoes, at Sh. 1250 per bag. He sold all the bags of potatoes making a profit of Sh.1000. Calculate the percentage profit he made on each bag?

- A. 25 %
- B. 80%
- C. 8%
- D. 20%

24. A salesman earns a basic salary of Sh 4500 per month plus a commission of 5% on the value of goods he sells above Sh. 10 000. In a certain month, he sold goods worth Sh. 15,500. How much salary did he earn that month?

- A. Sh 5000
- B. Sh 5275
- C. Sh 4775
- D. Sh 4500

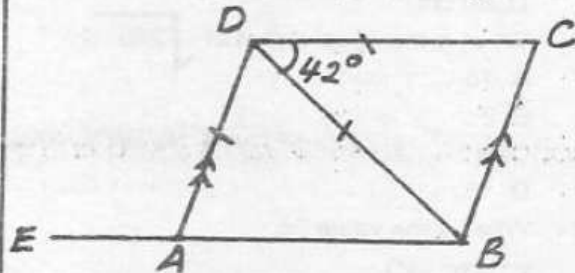
25. The temperature of an ice in a container was -26°C. By noon the temperature had risen by 8°C. What was the new reading on the Thermometer?

- A. - 34°C
- B. 18°C
- C. - 18°C
- D. 34°C

26. A bicycle wheel has a radius of 35 cm. What distance in km does it cover after 500 revolutions

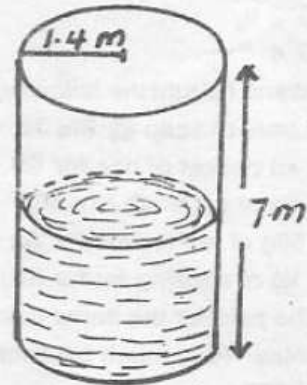
- A. 1.1 km
- B. 110 km
- C. 11 km
- D. 1100 km

27. In the figure below, AD is parallel to BC. line AD = BD = DC. Angle BDC = 42° EAB is a straight line. Find the size of angle DAE?



- A. 138°
- B. 111°
- C. 55.5°
- D. 124.5°

28. The tank shown below is  $\frac{3}{4}$  full of water. How many more litres are remaining to fill the tank (pie =  $\frac{22}{7}$ )



- A. 4312 L
- B. 10.78 L
- C. 10780 L
- D. 226 . 38 L

29. After an increase of 25% Mwangi's salary becomes Sh 9500. How much money was he earning before the increase?

- A. Sh 7600
- B. Sh 2375
- C. Sh 11875
- D. Sh 7125

30. Solve the inequality below

$$\frac{4x - 4}{3} < \frac{2x + 5}{4}$$

- A.  $x > 4.5$
- B.  $x < 4.5$
- C.  $x > 3 \frac{1}{10}$
- D.  $x < 3.1$

STD 8 MATHS

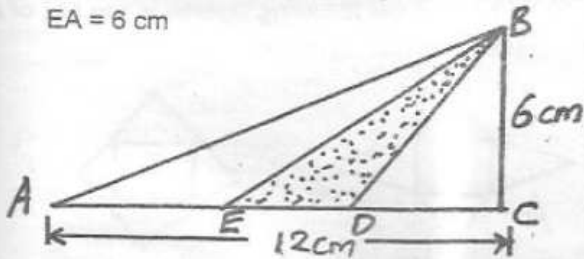
31. Cheromo sold his watch for Sh 960 and made a 20% profit. How much more profit could he have made if he could have sold it at 50% profit?
- A. Sh 1040  
 B. Sh 1200  
 C. Sh 160  
 D. Sh 240

32. Tap A can fill a tank in 3 minutes. Tap B can empty the same tank in 5 minutes. The tank was empty and the two taps were opened at the same time. How long did it take for the tank to be full?
- A. 15 minutes  
 B. 8 minutes  
 C. 2 minutes  
 D.  $7\frac{1}{2}$  minutes

33. A closed cube has a total surface area of  $384\text{ cm}^2$ . Calculate its volume?
- A.  $64\text{ cm}^3$   
 B.  $192\text{ cm}^3$   
 C.  $512\text{ cm}^3$   
 D.  $48\text{ cm}^3$

34. The ratio of boys to girls in a school of 84 pupils is 3 : 4. How many girls are there?
- A. 48  
 B. 66  
 C. 36  
 D. 112

35. The diagram below shows three triangles joined together  $AC = 12\text{ cm}$ ,  $DC = 5\text{ cm}$  and  $EA = 6\text{ cm}$



Find the area of the shaded triangle EDB?

- A.  $18\text{ cm}^2$   
 B.  $3\text{ cm}^2$   
 C.  $6\text{ cm}^2$   
 D.  $15\text{ cm}^2$

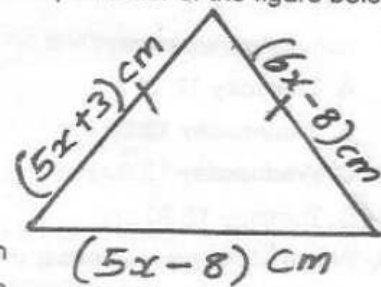
36. The total surface area of a closed cylindrical container is  $7.48\text{ m}^2$ . If the area of the curved part is  $4.4\text{ m}^2$ . What is the diameter of the container?

- A. 22m  
 B. 1.54 m  
 C. 1.4 m  
 D. 0.7 m

37. The cash price of a radio is Sh 3000. An interest of 25% is charged if the radio is bought on hire purchase terms. Jane bought the radio on hire purchase terms. She paid a deposit and twelve equal monthly installments. Each installment was Sh 262.50. How much deposit did she pay?

- A. Sh 150  
 B. Sh 3750  
 C. Sh 600  
 D. Sh 750

38. Calculate the perimeter of the figure below



- A. 153 cm  
 B. 221 cm  
 C. 157 cm  
 D. 163 cm

39. The road between chebunyo and Dikirr market is 5 km. Trees were planted on both sides of the road at an interval of 5m apart. How many trees were planted altogether?

- A. 1000  
 B. 1001  
 C. 2002  
 D. 2001

40. A clock loses 3 seconds in half an hour. If this clock is set right on Sunday at noon, what time will it show next Thursday when the correct clock reads 4.00pm?

- A. 3.50 pm  
 B. 12.45 am

C. 3 : 50 am

D. 12. 45 pm

41. What is the sum of the faces, vertices and edges found in an open cube?

A. 26

B. 22

C. 25

D. 24

42. The mean weight of six boys is 42 kg. Five of the boys weighs 42 kg, 43 kg, 40 kg, 44 kg and 38 kg. What is the difference between the heaviest and the lightest boy?

A. 6 kg

B. 4 kg

C. 7 kg

D. 5 kg

43. Biwott left home at 2330 hrs on Monday for a journey, which took  $12\frac{1}{2}$  to complete. On what day and time, in AM / PM system did he complete the journey?

A. Thursday 12:00 am

B. Wednesday 12:00 am

C. Wednesday 12.00 pm

D. Tuesday 12.30 pm

44. Which of the expressions is the simplest form of  $5(2a - b + 3) + 7(a + 4b + 2)$

A.  $3a + 3y + 29$

B.  $17a + 23b + 29$

C.  $17a + 27y + 17$

D.  $9a + 27b + 17$

45. Mwangi deposited Sh 50000 in a bank which paid simple interest at the rate of  $2\frac{1}{2}$  %pa. After two years, he withdrew all the money plus interest. How much money did he withdraw?

A. Sh 52 500

B. Sh 55000

C. Sh 5000

D. Sh 2500

46. Eight men can complete a piece of work in 12 days. How many more men are needed to complete the same work in 12 days?

A. 16

B. 8

C. 4

D. 24

47. The area of a parallelogram is  $480\text{ cm}^2$ . If its height is 12 cm, what is its length?

A. 40 cm

B. 30 cm

C. 20 cm

D. 48 cm

48. Evaluate :  $1 + 2 + 3 + (1 + 2 + 3 + 4)$

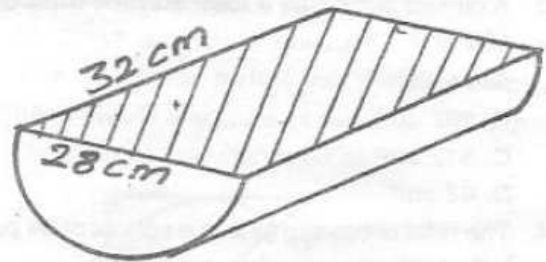
A. 30

B. 60

C. 33

D. 16

49. The following figure shows a solid with diameter of 28 cm and a height of 32 cm



What is the total surface area of the solid?

( $\text{Pie} = \frac{22}{7}$ )

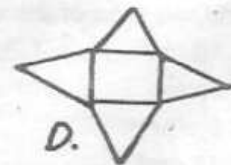
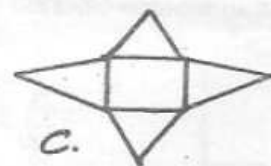
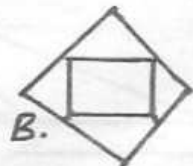
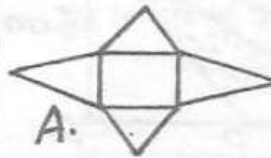
A.  $9856\text{ cm}^2$

B.  $2920\text{ cm}^2$

C.  $2816\text{ cm}^2$

D.  $896\text{ cm}^2$

50. Which of the following figures is the net of a square based pyramid?



STD 8 MATHS