
COUNTY MOCK EXAMS-STD 8 2016

MATHEMATICS PAPER

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NAIROBI CITY COUNTY MOCK EXAMS
STANDARD EIGHT - YEAR 2016
MATHEMATICS

Time: 2 Hours

READ THESE INSTRUCTIONS CAREFULLY

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

14. Work out the value of: $\frac{4^2 + 9^2}{2^2 - 2}$

- A. 48.5
- B. 97
- C. 24.25
- D. 13

The correct answer is A.

On the answer sheet:

1. [A][B][C][D] 7. [A][B][C][D] 14. [A][B][C][D] 24. [A][B][C][D] 34. [A][B][C][D]

In the Third set, the box with the letter A 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 of four boxes.

This Question Paper consists of 4 Printed pages

Candidates should check the question paper to ensure that all the pages are printed and no questions are missing.

TURN OVER

1. What is the place value of digit 5 in the product of 567 and 28?

- A. Thousands B. Hundreds
C. Five thousand D. Hundredths

2. Work out the value of: 0.18×4.28
 1.2×0.8

- A. 802.5 B. 80.25 C. 0.8025 D. 8.025

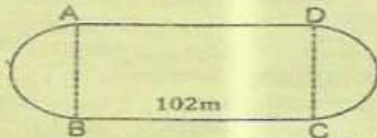
3. Which of the following is 80500303 written in words?

- A. Eight million, five thousand, three hundred and three
B. Eighty million, five hundred, three hundred and three
C. Eighty million, five hundred thousand, three hundred and three
D. Eight million, five hundred thousand, three hundred and three

4. Round off 6937.3407 to the nearest hundredths

- A. 6937.340 B. 6937.34
C. 6937.30 D. 7000.00

5. A person ran around the field below three times and covered a distance of 0.81 kilometres
(Take $\pi = \frac{22}{7}$)



What is the shortest distance between D and C?

- A. 2100m B. 33m C. 42m D. 21m

6. The total population of birds in a bird's sanctuary was 342878. The young birds were 878 more than the adult birds. How many young birds are in the sanctuary?

- A. 171878 B. 171000 C. 342000 D. 343756

7. Work out the value of: $(\frac{2}{10})^2 \div \frac{1}{10}$

- A. $2\frac{1}{10}$ B. $3\frac{1}{9}$ C. $2\frac{1}{3}$ D. $7\frac{1}{9}$

8. A customer paid sh. 21840 for a refrigerator after getting a discount of 9%. What was the deduction?

- A. sh. 4320 B. sh. 2160
C. sh. 24000 D. sh. 19680

9. The table below shows the postal rates for sending money orders:

Value of order(sh)	Ordinary money order commission	Express money order commission
Upto 500	42.00	77.00
501-1000	114.00	146.00
1001-3000	174.00	203.00
3001-5000	209.00	237.00
5001-10000	295.00	319.00
10001-20000	441.00	503.00
20001-30000	617.00	656.00
30001-35000	657.00	682.00

Kabuti sent ordinary money order of sh. 8500 to his son in Majimazuri and sh. 9000 express money order to his daughter in Malindi. How much total did he pay at the post office altogether?

- A. sh. 17500 B. sh. 18114
C. sh. 18138 D. sh. 17590

10. What is the possible value of p in the following

inequality .

$$3p - 5 < 7p - 17$$

- A. 2 B. 3 C. 1 D. 5

11. A lorry weighs 7.9 tonnes when loaded with bags of beans. The empty lorry weighs 2.4 tonnes. How many bags of beans each weighing 55kg were loaded on the lorry?

- A. 1000 B. 550 C. 55 D. 100

12. Construct triangle ABC in which line BC = 7cm, line CA = 9cm and angle ABC = 84°. Bisect angle BAC and let the bisector meet line BC at D. What is the value of angle ADC?

- A. 110° B. 70° C. 44° D. 50°

13. The table below shows the number of pupils who voted for their favourite fruits.

Fruits	Apples	Strawberry	Pas-sion	Gua-vas	Paw-paw	Lem-on
No. of pupils	10	12	13	10	—	7

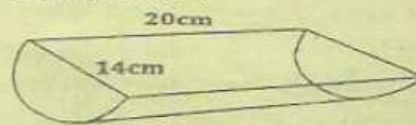
The average number of pupils who voted for each fruit was 10. What would be the angle for those who voted for pawpaws if the information was represented on a pie-chart?

- A. 90° B. 57.6° C. 48° D. 28.8°

14. Simplify: $\frac{3(2x + 2y) - 6x}{2(3x - 4y) + 8y}$

- A. $\frac{6y}{6x}$ B. $\frac{6x + 3y}{3x + 8y}$
C. $\frac{y}{x}$ D. $\frac{3x}{4y}$

15. The figure below is a trough. The trough was painted on the outer surface.



What area was painted? (Take $\pi = \frac{y}{7}$)

- A. 1034cm² B. 1540cm²
C. 594cm² D. 1188cm²

16. Joram is paid sh. 8400 per week. How much was he paid in a week he was absent for 3 days?

- A. sh. 1200 B. sh. 4800
C. sh. 3600 D. sh. 2800

17. What is the next number in the sequence below?

- 0, 2, 5, 10, 17
A. 26 B. 34 C. 27 D. 28

18. What is the value of $\frac{1}{3} \times \frac{1}{4} + \frac{1}{8}$ of $\frac{1}{2} + \frac{1}{12}$

- A. $\frac{5}{6}$ B. $\frac{3}{4}$ C. $\frac{1}{12}$ D. $\frac{1}{24}$

19. Three tractors start ploughing a shamba at intervals of 1 hour, 40 minutes and $\frac{1}{2}$ hour respectively. At 11.00am they were started off together. When will they be started off together again?

- A. 1.00 am B. 1.00pm
C. 12.00pm D. 1.30pm

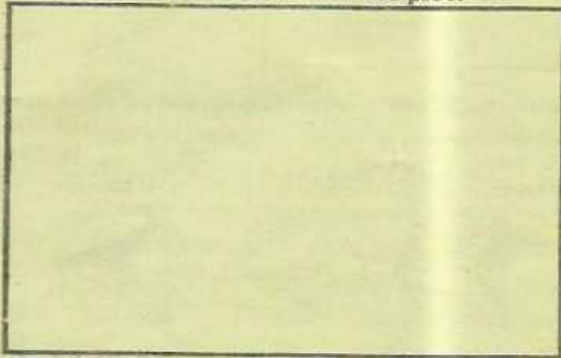
20. A farmer used his 30 hectare land as follows:

- $\frac{1}{6}$ of the area on planting beans
 $\frac{1}{3}$ of the area for coffee

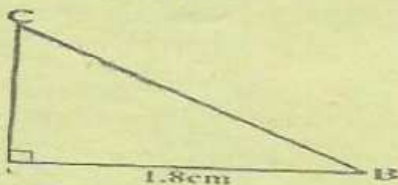
$\frac{1}{2}$ of the remainder for planting maize and the rest was planted potatoes

How much land was planted with coffee and maize?

- A. 15 ha. B. 10 ha C. 5 ha D. 20 ha
21. What is the value of x in the following equation :
 $\frac{5x-2}{2} + 4x = 12$
 A. $1\frac{1}{3}$ B. $1\frac{1}{2}$ C. 2 D. $1\frac{1}{12}$
22. The temperature of a liquid was 78°C . It was cooled at the rate of 3°C per minutes for a quarter hour. What was the reading after cooling ?
 A. 63°C B. 33°C
 C. 18°C D. 75°C
23. Work out: $7.2 + 1.6 \div 0.4 - 4.8$
 A. 0.8 B. 8 C. 80 D. 800
24. Saja bought a school bag and 2 pencils for each of her 5 children. The pencils cost sh. w each and the bags cost sh. 6t each. How much money did she spend altogether in shillings?
 A. $30t + 10w$ B. $30t + 5w$
 C. $60t + 10w$ D. $30t + 2w$
25. The diagram below represents a rectangular plot of land drawn to scale. If the actual length is 120m, what is the scale used to draw the plot?

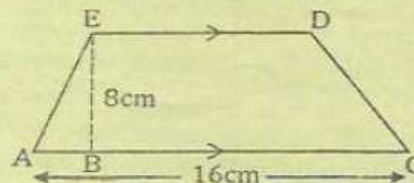


- A. 1: 150000 B. 1: 1500
 C. 1: 15000 D. 1:150
26. The area of a square floor is 625m^2 . How many square tiles of side 50cm will be used to cover the floor?
 A. 25 B. 250 C. 2500 D. 25000
27. Somo deposited sh. 10800 in a bank which paid a simple interest. At the end of the tenth month he withdrew a total of sh. 11340. At what rate per annum was the interest?
 A. 6% B. 0.5% C. 12.6% D. 10%
28. Babies in a health centre were found weighing 9kg, 11kg, 22kg, 6kg, 7kg and 8kg. What is the sum of the mean, mode and median of their mass?
 A. 19kg B. 10.5kg C. 8.5kg D. 2.0kg
29. The area of the triangle below is 2.16cm^2 . What is the length of CB?



- A. 2.4cm
 B. 3.6cm
 C. 3.0cm
 D. 4.2cm

30. Selly bought the following from a kiosk;
 3 packets of unga @ sh 122
 $2\frac{1}{2}$ kg of sugar at sh 100 per kg
 4 bar soaps at sh. 91 each
 Two- 500g packets of salt for sh. 30
 $\frac{1}{2}$ kg of cooking fat as sh. 160 per kg
 She paid cash with 6-two hundred shilling notes and was allowed a discount of 4%. How much balance did she get?
 A. sh. 42 B. sh. 192 C. sh. 30 D. sh. 150
31. Construct a rhombus QRST of side 4cm. Let the acute angle 55° be at QRS. What is the length of the longest diagonal in decimetre?
 A. 3.6 B. 7.2 C. 0.36 D. 0.72
32. During drought, a camel lost 16 kg. What was the percentage decrease if the mass of the camel is now 144kg?
 A. 10% B. $11\frac{1}{2}\%$ C. 28% D. 16%
33. Musa and Sam shared 420 mangoes in the ratio 5:7 respectively. How many more mangoes did Sam get than Musa.
 A. 24 B. 245 C. 175 D. 70
34. What is the measure of line ED given that the area of the figure below is 112cm^2



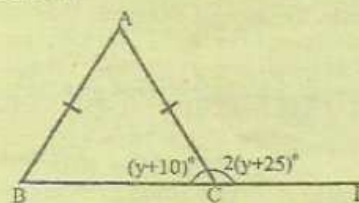
- A. 24cm
 B. 12cm
 C. 43cm
 D. 32cm

35. The table below shows bus fares between town A and G in shillings

A						
30	B					
60	40	C				
80	60	40	D			
90	70	50	40	E		
100	80	60	50	40	F	
120	90	70	60	50	30	G

Francis travelled from G to A via E in the morning and then travelled back to town C. How much in total did he spend on the journey?

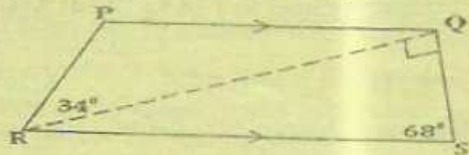
- A. sh. 120 B. sh. 140 C. sh. 160 D. sh. 200
36. What is the value of angle BAC in the figure below?



- A. 80°
 B. 50°
 C. 40°
 D. 130°

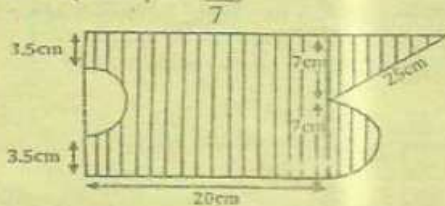
37. A motorist left A at 7: 30am for town B at an average speed of 80km/hr. He got a puncture at 11:30am which took him 45 minutes to repair. He resumed his journey and took 2 hours and 15 minutes at speed of 100km/hr. What was the average speed for the whole journey?
 A. $77\frac{1}{3}$ km/hr B. $71\frac{2}{3}$ km/hr
 C. $89\frac{1}{3}$ km/hr D. 90 km/hr

38. Construct a triangle XYZ in which angle XYZ = 75° , XY = 8cm and YZ = 7cm. Draw a circle to pass through the vertices of the triangle. Measure the diameter.
 A. 9.6cm B. 2.5cm
 C. 5cm D. 4.8cm
39. A salesman earns a salary of sh. 9000 per month. He also earns a commission on the sales above sh. 20000. In a certain month, he sold goods worth sh. 100000. If he earned a total of sh. 10600, what is the percentage commission paid?
 A. 8% B. 20% C. 1.6% D. 2%
40. In the figure below, line PQ is parallel to line RS. Angle PRQ = 34° , angle RSQ = 68°



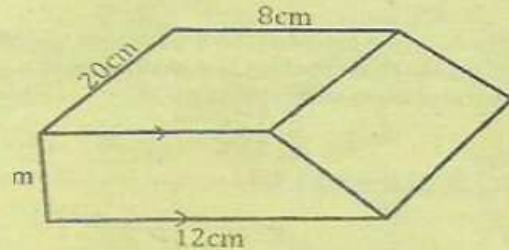
What is the size of angle RPQ?

- A. 68° B. 124° C. 112° D. 78°
41. The marked price of a TV set is sh. 40000. Mr. Wema bought it on hire purchase terms paying a deposit and ten monthly instalments of sh. 3000 each. If the hire purchase price was 25% more than the marked price, how much was the deposit?
 A. sh. 30000 B. sh. 10000
 C. sh. 20000 D. sh. 300
42. Work out the area of the shaded part in the figure below (Take $\pi = \frac{22}{7}$)

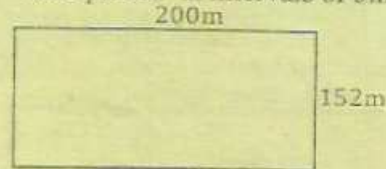


- A. 364cm^2 B. 386.75cm^2
 C. 383.25cm^2 D. 402.5cm^2
43. Abdi bought three trays of eggs for sh. 900. He paid sh. 100 to transport the eggs to his shop. During transportation ten eggs broke and she sold the rest in piles of 5 eggs for sh. 60. What percentage loss did he make given that a tray has 30 eggs each?
 A. 8% B. 12% C. 4% D. $4\frac{1}{2}\%$
44. Hassan is three times the age of Marcos. Wefwafwa is 30 years younger than Marcos. Their total age is 90 years now and Hassan is h years old. Which of the following expressions can be used to find the age of Marcos?
 A. $7h - 30 = 120$ B. $\frac{1}{2}h + 30 = 120$
 C. $7h + 30 = 90$ D. $\frac{1}{2}h - 30 = 120$
45. The following are properties of a quadrilateral:
 (i) Opposite sides are equal and parallel
 (ii) Diagonals bisect each other to form right angles
 (iii) Opposite angles are equal
 (iv) Has a pair of parallel lines.
 (v) All interior angles add up to 360°
 Which properties are for a trapezium?
 A. iv, iii B. v C. iv, v D. ii, iii
46. The capacity of a rectangular tank with a square base is 2.88 litres. If the height is 180cm, what is

- the width of the tank?
 A. 16cm B. 0.016cm C. 0.4cm D. 4cm
47. Kiwaya planted trees between 27th February 2012 to 4th April 2012. If he planted ten trees each day, how many trees did he plant altogether?
 A. 350 B. 380 C. 360 D. 370
48. What is the volume of the solid below?

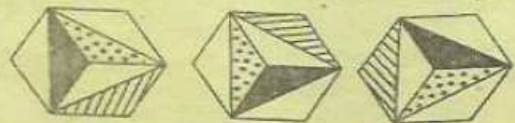


- A. 1440cm^3 B. 1200cm^3
 C. 720cm^3 D. 760cm^3
49. A school compound is in rectangular shape as shown below. Kahindi fenced it using posts. The posts were placed at intervals of 5m



The space for the gates was 4 metres. How many more posts were used?

- A. 141 B. 139 C. 140 D. 138
50. The figure below shows a pattern of shapes



Which of the following shapes is the next in the pattern?

