

MATHEMATICS PAPER

CLASS SEVEN

2015

AVAILABLE ONLINE AT:

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MATHEMATICS

Time: 2 hours

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 only 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 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:

- 12.** What is 43.837 rounded to the nearest hundredth?

- A. 43.80
- B. 43.90
- C. 43.84
- D. 43.830

The correct answer is (C)

On the answer sheet

2 (A) (B) (C) (D) **12** (A) (B) (C) (D) **22** (A) (B) (C) (D) **32** (A) (B) (C) (D) **42** (A) (B) (C) (D)

In the set of boxes numbered 14, the box with the letter C 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.

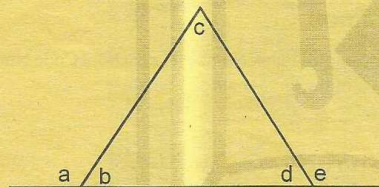
This question paper consists of 8 printed pages

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

1. How many groups of hundreds are there in the total value of digit 4 in 3406851?
- A. 40000
B. 400 000
C. 4000
D. 400

2. Which is the least number that can be subtracted from 37639 to make it divisible by 11?
- A. 3
B. 8
C. 4
D. 6

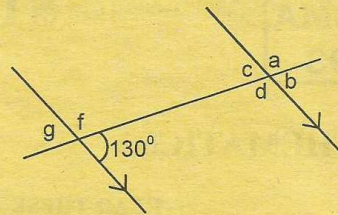
3. Which of the following statement is true about the triangle shown below?



- A. $c + d = a$
B. $b - c = a$
C. $c + d = e$
D. $c + d - e = 180^\circ$
4. Use $>$, $<$ or $=$ in the space below to make the statement true.
- $\frac{1}{9}$ of 207 _____ $24\frac{1}{8}$
- A. =
B. <
C. >
D. none

5. Simplify $2(x + 4y) + 3(2x - 2y)$
- A. $8x - 2y$
B. $8x - 14y$
C. $8x + 2y$
D. $8x + 14y$

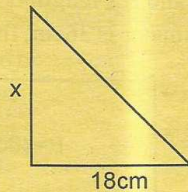
6.



Which one of the following statements is **NOT** true about the diagram above?

- A. $g = 50^\circ$
B. $c + f = 180^\circ$
C. $a = 50^\circ$
D. $g = 130^\circ$
7. Find the difference between the square roots of 441 and 169
- A. 272
B. 8
C. 400
D. 7
8. What is the value of
- $$\frac{5(56 - 25) + 3 \times 2}{4 \times 3}$$
- A. 15
B. 3
C. 36
D. 156
9. Convert 180% into a fraction
- A. $\frac{180}{100}$ B. $1\frac{4}{5}$
C. $1\frac{8}{10}$ D. $\frac{5}{9}$
10. If $a = 4$ $b = 2$ work out $7a - 12b + 9$
- A. 0.8
B. 8
C. 0
D. 4

11. Find the height x if area is 144cm^2 and base 18cm

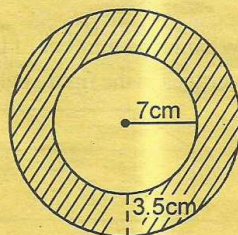


- A. 16cm
 B. 9cm
 C. 12cm
 D. 17cm
12. What is the name of a triangle whose sides are not equal?
 A. Co - interior triangle
 B. Isosceles triangle
 C. Equilateral triangle
 D. Scalene triangle

13. Work out

$$\frac{2}{3} \text{ of } \left(4\frac{1}{2} \div 2\right) \times \frac{1}{2}$$

- A. $\frac{2}{3}$
 B. $4\frac{1}{2}$
 C. $\frac{3}{4}$
 D. 1
14. Calculate the area of the shaded part
 $\pi = 3.14$



- A. 192.5cm^2
 B. 196.4cm^2
 C. 206.4cm^2
 D. 192.0cm^2

15. Find the value

$$\frac{4.8 \times 2.48}{3.6 \times 0.08} \text{ to 1 decimal place}$$

- A. 41.3
 B. 41.30
 C. 41.33
 D. 41.0
16. Ndegwa bought a hen at 820 and later sold it making a 20% profit. Find the selling price.
 A. sh.984
 B. 1120
 C. 4200
 D. 840
17. A cyclist covered 400m in 20sec . Find the speed in km/h .
 A. 48km/h
 B. 20km/h
 C. 72km/h
 D. 60km/h
18. A farm has coffee planted in rows. There are 474 rows each with 362 coffee trees. How many coffee trees are in the plantations?
 A. 171454
 B. 170588
 C. 171588
 D. 170488
19. A rectangle has a length of 24cm and a width of 10cm . What is the length of the diagonal?
 A. 26cm
 B. 32cm
 C. 28cm
 D. 25cm
20. Which of the statements below is true about a rhombus?
 A. All sides are parallel
 B. Diagonals intersect at right angles
 C. It's a special rectangle
 D. All the interior angles are equal

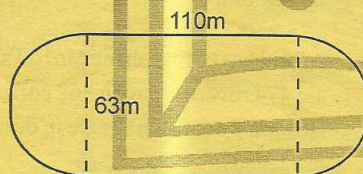
21. A bus left Nairobi at 11:25am and reached Eldoret at 3.45pm. How long did the bus take?

A. 7hrs 40min
B. 5.20am
C. 6hrs 20min
D. 4hrs 20min

22. Three bells A, B and C were ringing at a regular interval of 20min, 25min and 30min respectively. They rang together at 8.00a.m. At what time did they ring together again?

A. 1.40pm B. 2.30pm
C. 2:00pm D. 1.00pm

23. During a zonal athletics competition, a pupil ran round the track below 4 times. What distance did he cover in kilometres?



A. 418km B. 1.672km
C. 0.418km D. 1672km

24. Arrange from the smallest to the largest.

$\frac{4}{9}, \frac{3}{7}, \frac{2}{5}, \frac{1}{2}$

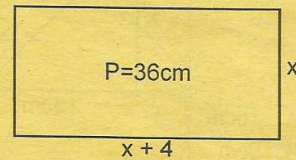
A. $\frac{3}{7}, \frac{2}{5}, \frac{4}{9}, \frac{1}{2}$

B. $\frac{1}{2}, \frac{3}{7}, \frac{2}{5}, \frac{4}{9}$

C. $\frac{4}{9}, \frac{2}{5}, \frac{1}{2}, \frac{3}{7}$

D. $\frac{2}{5}, \frac{3}{7}, \frac{4}{9}, \frac{1}{2}$

25. The breadth of the rectangle below is x cm and its length is $(x+4)$. If the perimeter is 36cm, find x



A. 28cm
B. 32cm
C. 7cm
D. 144cm

26. Work out:

t	kg	g
8	50	450
- 2	80	850

A. 10t 860kg 600g
B. 9t 960kg 60g
C. 5t 969kg 600g
D. 6t 960kg 600g

27. Simplify:

$$8 + 4x < 18$$

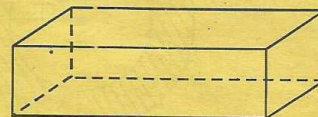
A. $x < 2$

B. $x > 2\frac{1}{2}$

C. $x < 2\frac{1}{2}$

D. $x > 2$

28. What is the number of the edges and vertices in the figure below?



A. 8
B. 12
C. 18
D. 20

29. James went to sleep at 2340hrs. If he woke up $6\frac{1}{2}$ hours later, at what time in am/pm did he wake up?

A. 6:50am
B. 6:50pm
C. 4:55pm
D. 4:55am

30. Find the next number in the pattern below.

9, 25, 49, 81 _____
A. 121
B. 169
C. 225
D. 144

31. In an examination 75% of the pupils passed. If 50 pupils failed the examination, how many more pupils passed than those who failed?

A. 250
B. 200
C. 150
D. 100

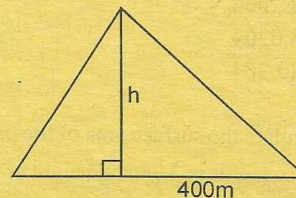
32. In a class of 64 pupils each drank 250ml of milk. How many litres of milk did they take all together?

A. 16 litres
B. 1600 litres
C. 1.6 litres
D. 16000 litres

33. Kalikaka is P years old. His sister is 5 years younger than him. What will be the sum of their ages in 3 years time?

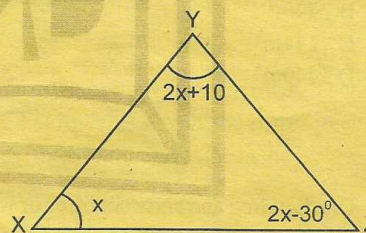
A. $(p + 8)$ years
B. $(2p + 11)$ years
C. $(p - 8)$ years
D. $(6p - 15)$ years

34. The area of the triangular plot of land is 4 ha. If the length of the base is 400m. What is the height in m?



A. 1000m
B. 100m
C. 200m
D. 2000m

35. What is the size of the largest angle in the figure below?



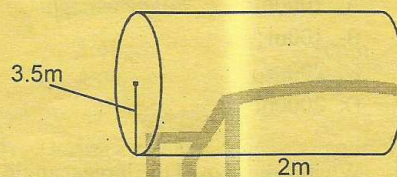
A. 40°
B. 50°
C. 90°
D. 120°

36. The path to Mwemas house is 1000m. Trees are planted on both sides of the road spaced at a distance of 5 metres intervals. How many trees were planted?

A. 5000
B. 402
C. 400
D. 500

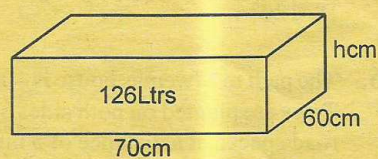
37. Work out:
 3.154×2.6
 A. 82.004
 B. 8.2004
 C. 8.0204
 D. 80.204

38. Calculate the surface area of the pipe whose radius is $3\frac{1}{2}$ m and height of 2m.
 $(\pi = \frac{22}{7})$



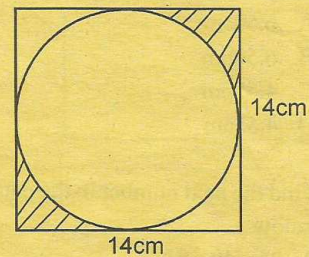
- A. 44m
 B. 44m^2
 C. 144m^2
 D. 440m^2

39. One hundred and sixty six litres of water were poured into a container whose base measures 70 by 60cm. Calculate the height of the water in the container



- A. 30cm^2
 B. 3cm
 C. 30cm
 D. 60cm

40. Calculate the area of the shaded part.



- A. 42cm^2
 B. 21.00cm^2
 C. 210cm^2
 D. 144cm^2

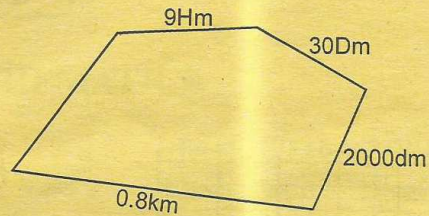
41. Work out :
 $3.6 \div 0.004$
 A. 900
 B. 90
 C. 9
 D. 9000

42. What is the value of

$$\frac{2.8 - 0.5 - 3.2 + 3}{0.4}$$

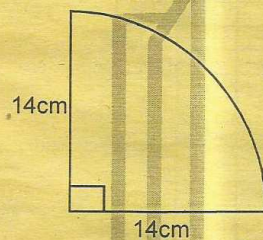
- A. 25.5
 B. 525
 C. 5.25
 D. 149

43. Calculate the perimeter of the figure below in m.



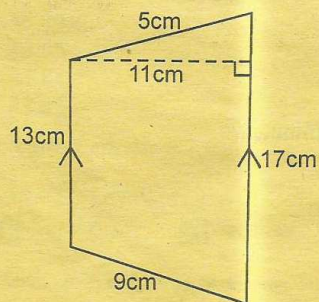
- A. 19640m
B. 2460m
C. 2450m
D. 45020m

44. Find the perimeter of the figure below



- A. 250cm
B. 50cm³
C. 50cm²
D. 50cm

45. Find the area of the figure below



- A. 165.5cm²
B. 165cm²
C. 204cm²
D. 198cm²

46. Find the next number in the sequence below.

$$\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, 1, 1\frac{1}{4} \text{ —————}$$

- A. $\frac{1}{2}$ B. 2
C. $1\frac{1}{2}$ D. $\frac{1}{4}$

47. What is the value of

$$\frac{1}{2} + \frac{3}{4} \text{ of } \frac{1}{3} + \left(1\frac{1}{2} \div 6\right)?$$

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

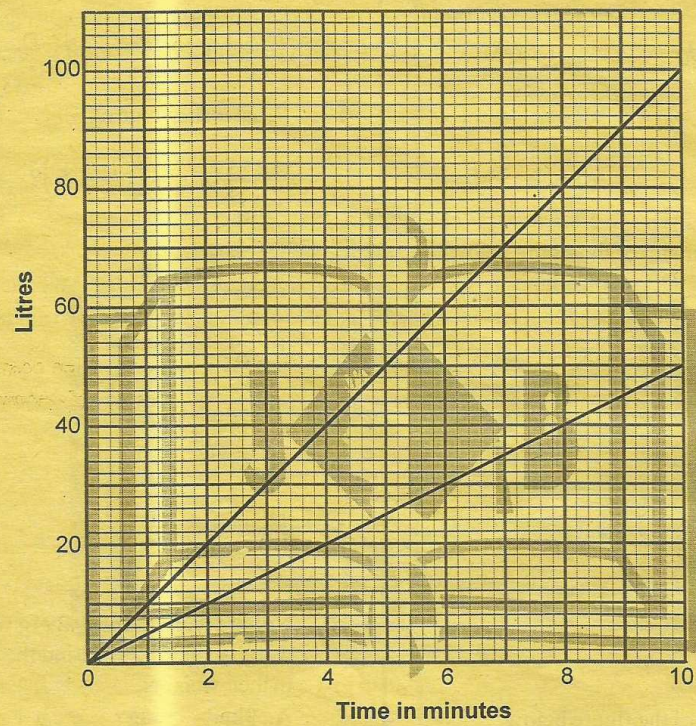
48. Ndichu weighs 48kg 294g while Kibe weighs 39kg 729g. Find the difference in their weights.

- A. 9kg 555g
B. 8kg 565g
C. 8kg 655g
D. 8kg 656g

49. Kimani had a basket of mangoes and apples. He sold a $\frac{1}{3}$ of the mangoes and $\frac{1}{4}$ of apples from the basket. In total he sold 20 fruits. If $\frac{1}{2}$ of the fruits he sold were apples, how many fruits remained in the basket?

- A. 40
B. 20
C. 30
D. 50

50. The graph below shows the amount of milk flowing from two taps p and q at the same time in a milk processing plant.



What is the total amount of milk in the container after 6.8 minutes?

- A. 102 litres
- B. 106 litres
- C. 105 litres
- D. 150 litres