

# DISTINCTION NATIONAL EXAMINATION PANEL



## STANDARD SEVEN SEVENTH TRIAL - 2021

7

ROYAL

TIME: 2HRS

### MATHEMATICS

#### READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question booklet and a separate answer sheet. The question paper 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 this question booklet.

#### HOW TO USE THE ANSWER SHEET

4. Use an ordinary pencil only.
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 brackets [ ].
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.**

4. Change three thousand hectometres into kilometres

- A. 3
- B. 300
- C. 30
- D. 0.3

The correct answer is **B. (300)**.

**On the answer sheet**

- 4.** [A] [B] [C] [D]    **14.** [A] [B] [C] [D]    **24.** [A] [B] [C] [D]    **34.** [A] [B] [C] [D]

In the first set, the box with the letter **B** printed in it is marked.

11. Your dark line **MUST** be within the brackets.

12. For each question **ONLY ONE** bracket is to be marked in each of four brackets.



- Write 60000601 in words.
  - six million six thousand and one
  - six million six hundred and one
  - sixty million six thousand and one
  - sixty million six hundred and one.
- What is the total value of 8 in the number 37.489?
  - 0.8
  - 0.08
  - 0.80
  - 0.008
- What is the area of a square whose length is  $2\frac{1}{2}$  m?
  - $1\frac{1}{2}$  m<sup>2</sup>
  - $5\frac{1}{4}$  m<sup>2</sup>
  - $1\frac{1}{3}$  m<sup>2</sup>
  - $5\frac{1}{16}$  m<sup>2</sup>
- Which one of the following is the least number that can be formed using the digits 730154?
  - 103457
  - 134570
  - 13457
  - 754310
- What is 7395876 rounded off to the nearest ten thousand?
  - 7300000
  - 7390000
  - 7310000
  - 7400000
- Which one of the following number is not divisible by 11?
  - 10395
  - 93544
  - 939211

- A bus had 65 passengers on board. Each passenger was charged sh.1250 to travel from Nairobi to Kisumu. How much money was collected from the passengers altogether?
  - Sh. 1313
  - Sh. 81250
  - Sh. 8125
  - Sh. 80250
- Complete the magic square below.

B	A	7
6		8
	8	6

What is the product of the numbers represented by letter A and B?

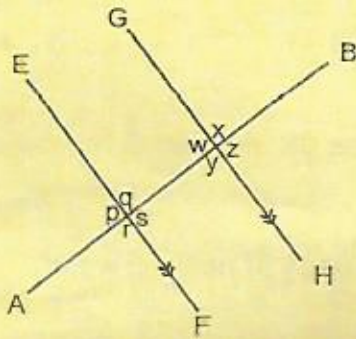
- 24
  - 49
  - 48
  - 42
- A bank gives simple interest at a rate of 7% p.a. A customer deposited sh. 10000 in the bank. Calculate the total amount available in her account by the end of the fifth year.
    - Sh. 3500
    - Sh. 13000
    - Sh. 12500
    - Sh. 13500
  - Calculate the value of  $1\frac{1}{4} - (\frac{2}{5} \text{ of } 3\frac{1}{3}) \div 2\frac{2}{3}$ 
    - $1\frac{1}{2}$
    - $1\frac{3}{4}$
    - $\frac{1}{2}$
    - $\frac{3}{4}$

11. What is the next fraction in the pattern?

$\frac{1}{2}, 1\frac{1}{4}, 2, \underline{\hspace{2cm}}$

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

12. In the diagram below, line EF is parallel to line GH. Line AB is a transversal.



Which one of the following angles is equal to angle y?

- A. p                              B. q  
 C. w                              D. z

13. A milk dealer bought 100L of milk. She sold  $\frac{3}{8}$  of it to her customers and used  $\frac{2}{5}$  to prepare tea in her hotel. What fraction of the milk remained?

- A.  $\frac{31}{40}$                       B.  $\frac{11}{40}$   
 C.  $\frac{9}{40}$                       D.  $\frac{7}{40}$

14. Which one of the following statements is **false** about a parallelogram?

- A. All the lines are equal  
 B. It has two pairs of parallel lines  
 C. Diagonals are not equal  
 D. Interior angles adds up to  $360^\circ$

15. Find the value of p in the equation below.

$\frac{1}{4}(16p - 12) + 7 = 16$

- A. 4                              B. 5

16. The longest side of a right-angled triangle measures 39cm. One of the shorter side measures 15cm. What is the perimeter of the triangle?

- A. 36cm  
 B. 90cm  
 C. 54cm  
 D. 72cm

17. If  $w= 9, x= 5$  and  $z=6$ . Work out the value of

$3(2x + w) - (w - z + x)$

- A. 49  
 B. 65  
 C. 57  
 D. 51

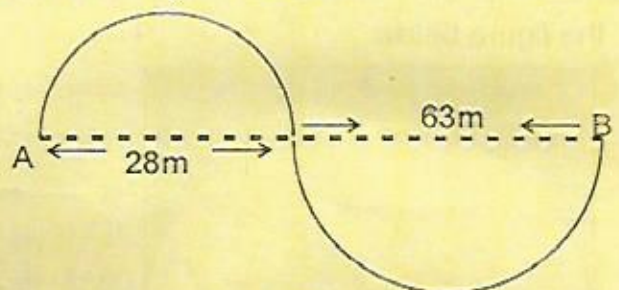
18. The length of each side of a square garden is 350m. Calculate its area in ares.

- A. 122500  
 B. 1225  
 C. 122.5  
 D. 12.25

19. What is the value of  $\frac{1.6 \times 2.4 \times 1.5}{0.72}$ ?

- A. 8                              B. 0.8  
 C. 80                              D. 0.08

20. What is the distance from point A to point B in the diagram below?



- A. 163m                      B. 143m

21. Construct triangle JKL in which angle  $\angle JKL = 90^\circ$ . Line  $JK = 6\text{cm}$  and  $KL = 8\text{cm}$ . Bisect lines  $KL$  and  $JK$ . Let the bisectors meet at point  $O$  with center  $O$  and  $OJ$  as the radius. Draw a circle to passing through points  $J, K$  and  $L$ . What is the diameter of the circle?

- A. 5cm                      B. 4.5cm  
C. 10cm                     D. 3.5cm

22. A circular wheel has a diameter of 0.7m. How many kilometers will it cover after covering 5000 revolutions?

- A. 22000                    B. 22  
C. 11000                    D. 11

23. The area of a parallelogram is  $72\text{cm}^2$ . Its length measures 12cm. What is the height of the parallelogram?

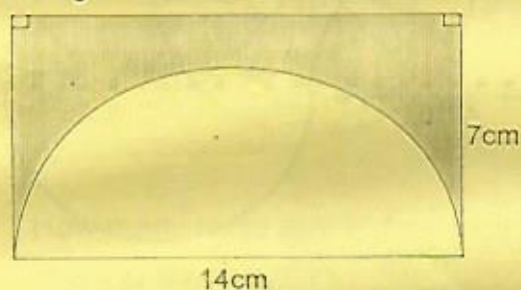
- A. 12cm                    B. 24cm  
C. 6cm                     D. 16cm

24. Remove the bracket and simplify the following.

$$\frac{5}{9}(18 + 27p) + \frac{1}{3}(18 - 30p)$$

- A.  $5p + 16$   
B.  $16 - 5p$   
C.  $5p + 4$   
D.  $4 - 5p$

25. Calculate the area of the shaded part in the figure below.



- A.  $98\text{cm}^2$                       B.  $42\text{cm}^2$

26. Nkita bought a pair of shoes for sh. 875. Its marked price was sh. 1000. What was the percentage discount given?

- A. 15%                      B. 125%  
C.  $12\frac{1}{2}\%$                       D. 1.25%

27. A cylindrical tank has a diameter of 1.4m. Its height is 2m. How many litres of water can it hold when full?

- A. 3080L  
B. 3800L  
C. 1540L  
D. 15400L

28. How many 70kg bags of rice will weigh 14tonnes?

- A. 5                              B. 5000  
C. 20                            D. 200

29. A bag of maize weighed 80kg. After drying up its mass reduced by 5%. What was the mass of the maize after drying up?

- A. 84kg                      B. 74kg  
C. 76kg                      D. 75kg

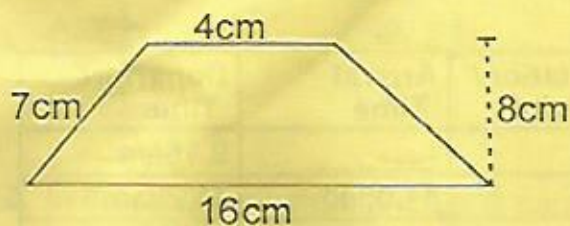
30. Metta bought 2 packets of biscuit @ sh. 75,  $1\frac{1}{2}\text{kg}$  of cooking oil at sh. 130 per kg and one 2kg packet of wheat flour at sh. 90 per packet. He paid for them using sh. 1000 note. How much did he receive as balance?

- A. Sh. 435                      B. Sh. 565  
C. Sh. 525                      D. Sh. 475

31. A closed cuboid has a length of 20cm, its width is 10cm while its height was 5cm. What was its surface area?

- A.  $1000\text{cm}^2$   
B.  $350\text{cm}^2$   
C.  $600\text{cm}^2$

32. Calculate the area of the trapezium drawn below.

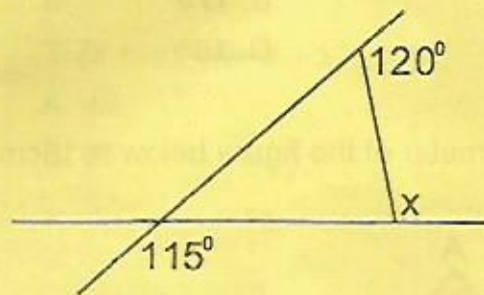


- A.  $70\text{cm}^2$                       B.  $128\text{cm}^2$   
 C.  $112\text{cm}^2$                     D.  $80\text{cm}^2$
33. A sales girl is paid sh. 20 as commission on sale of sh. 500. How much did she earn as commission after selling 125 items at sh. 500 each?
- A. Sh. 500  
 B. Sh. 2500  
 C. Sh. 10000  
 D. Sh. 62500
34. If 8cm represent 12km in a map. What is the scale drawing used?
- A. 1:150000  
 B. 1:300000  
 C. 1: 15000  
 D. 1: 30000
35. Demka scored a mean score of 72% in five subject. He scored 74% in English, 78 in Kiswahili and 66% in Mathematics. What was the average score is the remaining subject?
- A. 142                              B. 72  
 C. 71                                D. 74
36. The volume of a cuboid is  $60\text{cm}^3$ . Its base measures 6cm by 4cm. Calculate the height of the cuboid?
- A. 5cm                              B. 3cm

37. Each of the 3 pick up carried 3tonnes 70kg, 700g of maize. Calculate the total mass of maize carried by the pickups.

- A. 9kg 200kg 100g  
 B. 9kg, 212kg, 100g  
 C. 9kg, 210kg, 100g  
 D. 9kg, 210kg, 2100g

38. What is the size of the angle marked x in the figure below?



- A.  $115^\circ$                               B.  $130^\circ$   
 C.  $65^\circ$                                 D.  $125^\circ$
39. The sum of the ages of Juma and Ali is 65 years. If Ali is 5 years older than Juma, how old will he be 5 years to come?
- A. 60yrs                              B. 30yrs  
 C. 40yrs                                D.  $37\frac{1}{2}$ yrs
40. A tax driver went to sleep 24 minutes past midnight. What time was it in 24hrs clock system?
- A. 1224Hrs  
 B. 2324Hrs  
 C. 0024 hrs  
 D. 24241
41. A customer paid sh. 85 for 5 pens. How much would he have paid if he had bought 2 pens?
- A. sh. 17.00  
 B. sh. 8500  
 C. sh. 42.50  
 D. sh. 34.00

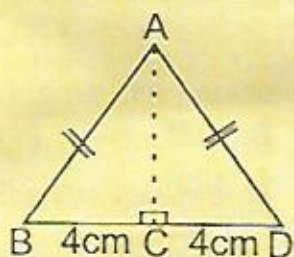
42. Teddy had 12- sh.500 notes. He changed the money into sh. 200 notes. How many notes did he receive?

- A. 30
- B. 300
- C. 60
- D. 600

43. There are 40 pupils in a class. On average 5 pupils are recorded absent every day. Calculate the total number of pupils present in 5 days.

- A. 35
- B. 175
- C. 165
- D. 195

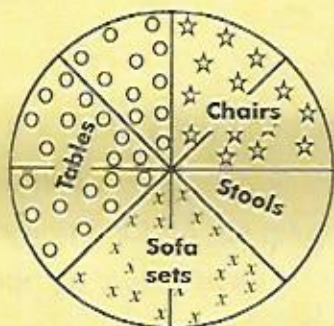
44. The perimeter of the figure below is 18cm



What is the length of line AC

- A. 3cm
- B. 4cm
- C. 5cm
- D. 6cm

45. A carpenter made 48 furniture in one month. The pie chart below represent the types of furniture he made?



How many more tables than stools did he make in the month?

- A. 6
- B. 8

46. The table below shows arrival and departure time of a train travelling from point A to point F.

Station/ Point	Arrival Time	Departure Time
A		9.15am
B	11.05am	11.20am
C	12.30pm	12.40pm
D	1.50pm	2.00pm
E	3.10p.m	3.40pm
F	4.20pm	

How long did it take to travel from point B to point D

- A. 2hrs 40mins
- B. 1hr 20mins
- C. 1hr 45mins
- D. 2hrs 30mins

47. A company bought 5 plots for its members. The measurement for each plot were 200m by 120m. Calculate the total area of land the company bought in hactares

- A. 1.2
- B. 12
- C. 120
- D. 1200

48. The table below shows the number of people who took the covid-19 Jab in 7 days in a certain hospital.

Days	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Number of people	15	24	26	14	9	2	0

What percentage of the people who took the Jab in that week took the Jab on Friday?

- A. 90%
- B. 36%
- C. 10%
- D. 18%

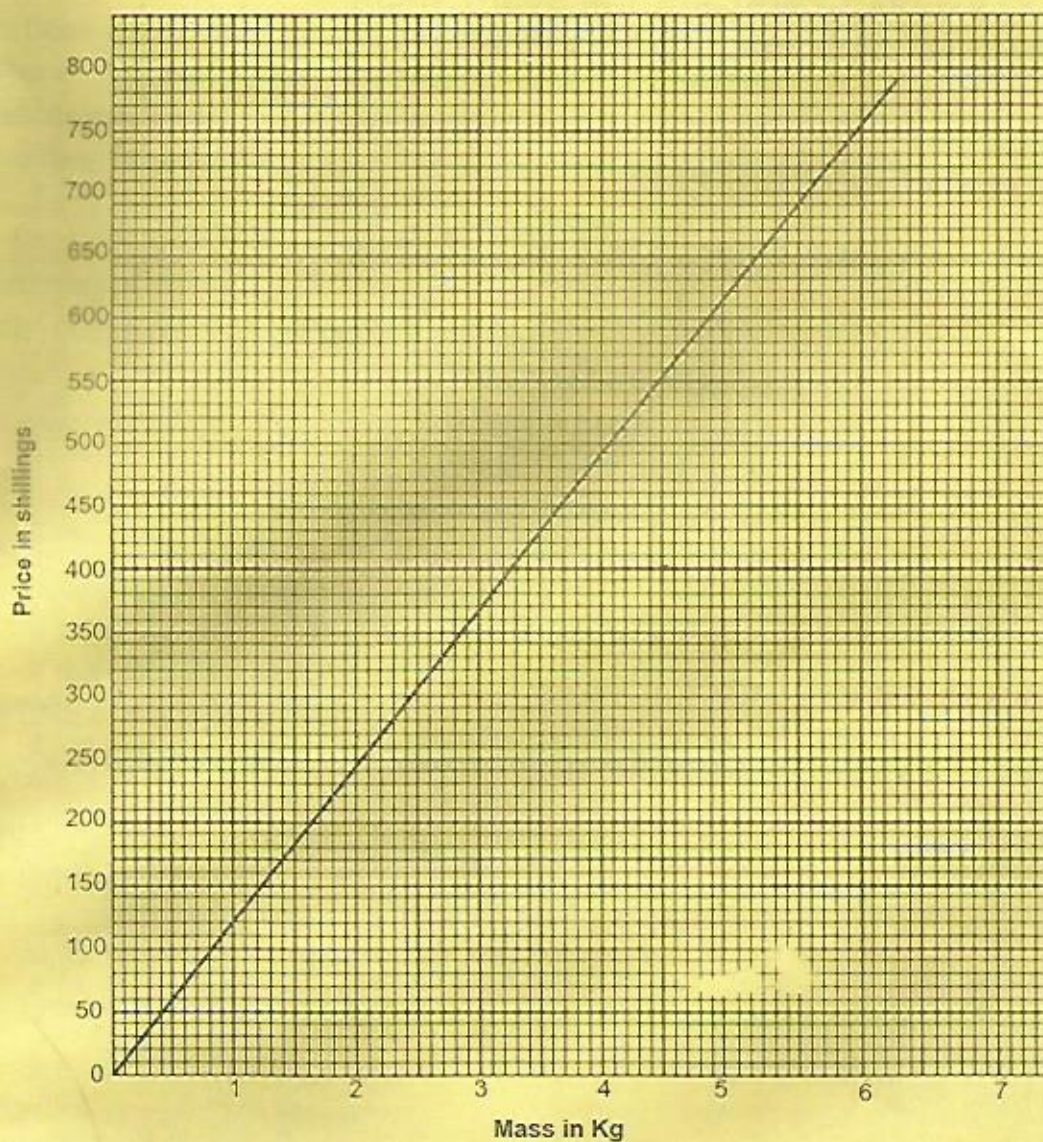
49. The table below shows commissions charged on parcel sent through the post office.

Weight step	Charges
Up to 100g	50.00
Over 100g up to 250g	80.00
Over 250g upto 500g	120.00
Over 500g upto 1kg	180.00
Over 1kg upto 2kg	230.00
Over 2kg upto 5kg	300.00

A man sent two parcels weighing 750g each and another one weighing 2.2kg. How much was he charged at the post office?

- A. Sh. 660.00  
B. Sh. 780.00  
C. Sh. 480.00  
D. Sh. 600.00

50. The graph below shows the price of sugar as sold at Fair-price supermarket.



A lady bought sugar which costed her sh. 540. Calculate the mass of sugar the lady bought.

- A. 4kg  
B.  $4\frac{1}{2}$ kg  
C. 5kg  
D.  $3\frac{1}{2}$ kg