



# DISCOVERY NATIONAL EXAMINATIONS

## STANDARD SEVEN - YEAR 2021

### MATHEMATICS

Time : 2 hours

1. Write in symbols. One million eight hundred thousand and seventy seven.
- A. 1810077                      B. 180077  
C. 1800077                      D. 1080077

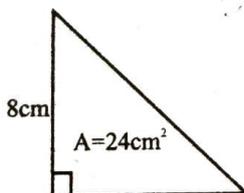
2. Express 0.04 as percentage
- A. 40%                      B. 0.4%  
C. 4%                      D. 400%

3. What is the total value of digit 5 in the number 6385429?
- A. 50                      B. 500  
C. 5000                      D. 50000

4. The school enrolment of pupils in Koma district was; Boys 8493, girls 7648. How many pupils were enrolled altogether?
- A. 845                      B. 15141  
C. 16041                      D. 16141

5. Find the product of  $6\frac{2}{3}$  and  $1\frac{1}{2}$ ?
- A. 10                      B.  $4\frac{4}{5}$   
C. 20                      D. 30

6. The area of a triangle below is  $24\text{cm}^2$ . Its height is 8cm. Find its base.



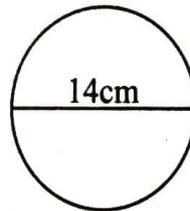
- A. 16 cm                      B. 4cm  
C. 3 cm                      D. 6cm

7. Work out;  $8700212 - 7458356$
- A. 1241846                      B. 1141856  
C. 1241856                      D. 1251866

8. Work out;  $0.09 \times 0.8$
- A. 0.72                      B. 0.072  
C. 0.0072                      D. 72

9. Convert 2500ml into dl.
- A. 25 dl                      B. 250 dl  
C. 2.5 dl                      D. 0.25dl

10. Find the circumference of the circle drawn.  
Use  $\pi = \frac{22}{7}$ .



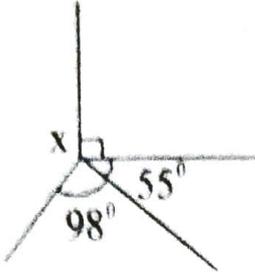
- A.  $44\text{ cm}^2$                       B. 88cm  
C. 22 cm                      D. 44cm

11. Divide  $4.272 \div 4$
- A. 1.068                      B. 168  
C. 10.68                      D. 0.168

12. Solve the equation  $\frac{1}{3}x + 8 = 11$
- A. 57                      B. 1  
C. 0                      D. 9

13. A wheelbarrow was bought at 32000 and sold for sh 28000. Calculate the percentage loss.
- A. 25%                      B. 10%  
C. 20%                      D. 32%

14. Find the value of X



- A.  $153^\circ$                       B.  $243^\circ$   
C.  $117^\circ$                       D.  $217^\circ$

15. Find  $\sqrt{2\frac{1}{4}}$

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

16. A lorry travelled from Isiolo to Karatina 168km away in 4 hours. At what speed was it travelling at?

- A. 24km/h                      B. 42 km/h  
C. 82 km/h                      D. 672 km/h

17. Work out;  $4.75 + 38.407 + 27$

- A. 69.482                      B. 43.427  
C. 42.752                      D. 70.157

18. What is the sum of the edges and faces of a cube?

- A. 18                              B. 12  
C. 6                                D. 20

19. Simplify the expression below;

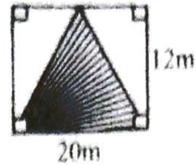
$$11a - 7b + 9b - 8a$$

- A.  $3a + 2b$                       B.  $3a + 16b$   
C.  $3a - 2b$                       D.  $19a + 2b$

20. Convert 600ml to decilitres.

- A. 60dl                          B. 6000 dl  
C. 6 dl                            D. 0.6 dl

21. What is the area of the shaded part?



- A.  $120 \text{ cm}^2$                       B.  $240\text{m}^2$   
C.  $240\text{cm}^2$                       D.  $120\text{m}^2$

22. Round off 4.857 correct to two decimal places.

- A. 4.80                          B. 4.90  
C. 4.86                          D. 4.84

23. Work out GCD of 50 and 20

- A. 20                              B. 5  
C. 10                              D. 100

24. If 25% represents 150 items. How many items are represented by 60%?

- A. 300                            B. 275  
C. 450                            D. 360

25. A lesson started at 11.55 am and ended at 12.40 pm the same day. How long was this lesson?

- A. 40 min                          B. 45 min  
C. 35 min                          D. 30 min

26. Mutua bought;

*2 pks of maize flour @ sh 100*

*500g packets of tea leaves for sh 75.00*

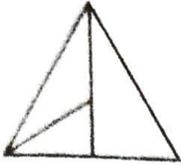
*2 loaves of bread @ sh 36.00*

He paid the bill with five hundred shillings note. How much was his change?

- A. sh 345                          B. sh 347  
C. sh 153                          D. sh 155

27. The ages of 6 boys are 13, 15, 16, 14, 14 and 12 years. What was the average age of the boys?
- A. 15 years                      B. 12 years  
C. 14 years                        D. 16 years

28. How many triangles are in the figure below?



- A. 4                                      B. 5  
C. 6                                      D. 7

29. Write 45 in Roman numbers.

- A. XXXXV                              B. XLVI  
C. XLV                                    D. LXV

30. Add

Hrs	mins	sec
8	32	45
+ 6	55	18

- A. 14h 87 min 63s  
B. 14h 28 min 3s  
C. 15h 28 min 3s  
D. 16h 28 min 3s

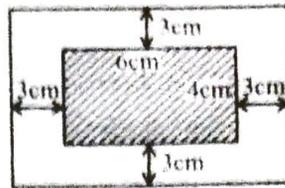
31. Add  $3\frac{1}{4} + 4\frac{1}{2}$

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

32. Which of the following numbers is not divisible by 8?

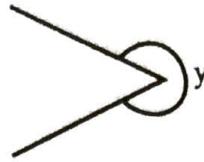
- A. 95238                                      B. 102064  
C. 11272                                      D. 52632

33. Find the area of unshaded part in the figure below.



- A.  $120\text{cm}^2$                               B.  $96\text{cm}^2$   
C.  $24\text{cm}^2$                                 D.  $32\text{cm}^2$

34. What type of angle marked  $y$  is shown below?



- A. Obtuse angle  
B. Reflex angle  
C. Acute angle  
D. Right angled

35. Find the sum of the squares of 5 and 6.

- A. 11    B. 61  
C. 22    D. 30

36. One bell rings after 4 minutes and another after 5 minutes. How long does it take for the two bells to ring together again?

- A. 9 min    B. 20 min  
C. 1 hour    D. 30 min

37. What is the volume of a cuboid measuring 2m by 3m by 1m in  $\text{cm}^3$ ?

- A.  $6\text{cm}^3$     B.  $60000\text{cm}^3$   
C.  $600000\text{cm}^3$                                       D.  $6000000\text{cm}^3$

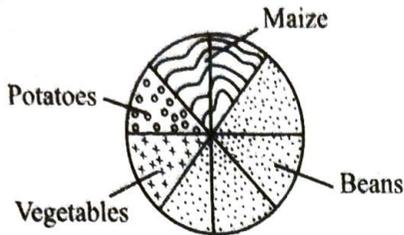
38. Draw triangle ABC in which  $AB=6\text{cm}$ ,  $BC=8\text{cm}$  and  $\text{angle } ABC=90^\circ$ . What is the measure of line AC?

- A. 7 cm    B. 6 cm  
C. 10 cm    D. 8cm

39. Convert 9kg 400g into grams only

- A. 90400 g                      B. 9.4g  
C. 9400g                         D. 0.94g

40. A farm has an area of 56 hectares. The circle graph shows the plants planted in the farm. How many hectares are under maize?



- A. 7 ha                              B. 14 ha  
C. 28 ha                            D. 16 ha

41. Write all prime numbers between 20 and 30.

- A. 21, 23, 29                    B. 23, 27  
C. 27, 29                         D. 23, 29

42. I think of a number X, subtract 11, multiply the result by 4, the answer is 20. What is the number x?

- A. 10                                B. 8  
C. 16                                D. 44

43. Simplify  $4(4x + 3y) + 2(5x - 2y)$

- A.  $26x + 8y$                     B.  $26x + y$   
C.  $26x + 10y$                     D.  $22x + 8y$

44. A helicopter covered a distance of 1800m in 190 seconds. Calculate its speed.

- A. 18m/s                         B. 180m/s  
C. 1800m/s                        D. 1.8m/s

45. What is the supplement of  $134\frac{1}{2}^\circ$ ?

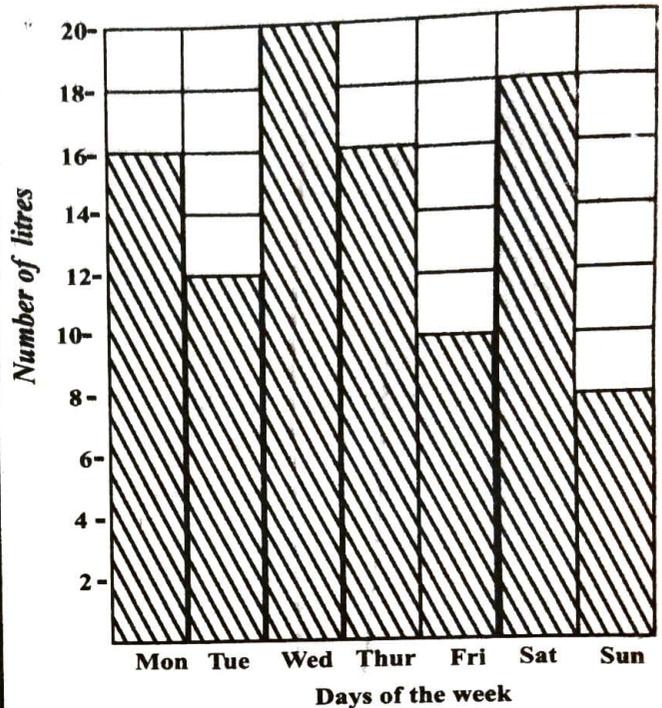
- A.  $180^\circ$                             B.  $44\frac{1}{2}^\circ$   
C.  $46^\circ$                              D.  $45\frac{1}{2}^\circ$

46. 1 cm represents 1 km can be written as

1 cm represents \_\_\_ cm

- A. 100000                         B. 10000  
C. 1000                             D. 100

*Use the following bar graph to answer questions 47-50.*



47. On which day was there the highest production of milk?

- A. Monday                         B. Saturday  
C. Wednesday                    D. Sunday

48. How much milk was obtained on Tuesday?

- A. 10 Litres                        B. 16 Litres  
C. 20 Litres                        D. 12 Litres

49. How many more litres were obtained on Monday than on Friday?

- A. 16 Litres                        B. 10 Litres  
C. 6 Litres                         D. 26 Litres

50. How much milk was produced in the whole week?

- A. 100                                B. 90  
C. 104                                D. 91