



DISCOVERY NATIONAL EXAMINATIONS

STANDARD SIX - YEAR 2021

MATHEMATICS

Time : 2 hours

1. Write five hundred fifty five thousand six hundred and sixty nine in figures.

A. 55500669
B. 555669
C. 55506609
D. 5555696

2. Simplify;

$$\frac{80}{100}$$

A. $\frac{40}{50}$

B. $\frac{8}{25}$

B. $\frac{4}{25}$

D. $\frac{4}{5}$

3. What is the place value of digit 6 in the number 36502?

A. Ones
B. Tens
C. Hundreds
D. Thousands

4. Change 4km 35m into meters

A. 435 m
B. 4035m
C. 40035 m
D. 4350 m

5. Kilonzo bought $\frac{3}{5}$ kg of potatoes and $\frac{1}{5}$ kg of tomatoes. What was the total mass of the items he bought?

A. $\frac{4}{15}$ kg
B. $\frac{14}{15}$ kg
C. $\frac{3}{8}$ kg
D. $\frac{3}{15}$ kg

6. What is the place value of digit 4 in the number 792.843?

A. Tenths
B. Hundredths
C. Thousandths
D. Hundreds

7. Multiply; 35.3×4

A. 14.12
B. 13.12
C. 141.2
D. 1.412

8. How many rectangles are in the figure below?



A. 4
B. 5
C. 7
D. 9

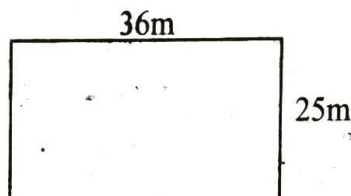
9. What is 29 in Roman numbers?

A. LXI
B. XIX
C. XXIX
D. XXI

10. What is the G.C.D of 6, 42 and 24?

A. 2
B. 3
C. 168
D. 6

11. Find the area of the rectangle below.

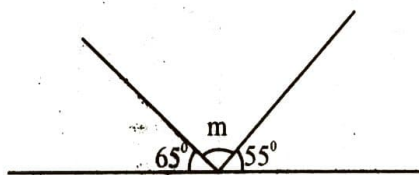


A. 122 cm^2
B. 900 cm^2
C. 900 cm^2
D. 1800 cm^2

12. Work out $3.08 + 6.8 + 12$

A. 21.88
B. 10.00
C. 3.88
D. 38.8

13. Find the value of the angle marked m



A. 60°
B. 55°
C. 45°
D. 180°

14. How many half kilograms are there in 17 kg?

- A. 17
C. 68
B. 34
D. 8

15. Find the value of w in $17 + w = 30$

- A. 13
C. 47
B. 23
D. 12

16. Add

km	m	cm
8	270	30
+ 6	980	70

- A. 15km 251 m 00 cm
B. 14 km 251 m 100 cm
C. 15 km 250 m 100cm
D. 14 km 1251 m 00 cm

17. Work out;

$$14 \times 1\frac{1}{2}$$

- A. $14\frac{1}{2}$
B. $15\frac{1}{2}$
B. 21
D. $12\frac{1}{2}$

18. Divide $9 \overline{)9027}$

- A. 1003
C. 103
B. 13
D. 1030

19. Pick the like terms in the expression

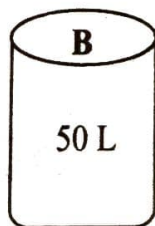
$$9t + 8p + 6t + 3p + 2p$$

- A. 28 pt
C. $15t + 13p$
B. $15t - 13p$
D. $13t + 15p$

20. How many containers of A will fill container B?

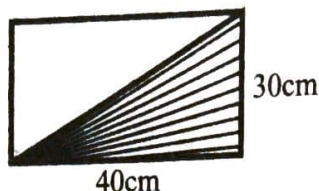


- A. 25
C. 200



- B. 50
D. 100

21. What is the area of the shaded part?



- A. 140cm^2
C. 1200cm^2
B. 600cm^2
D. 200cm^2

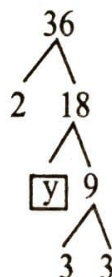
22. The scale on a map is 1 centimetres represents 10 m. Find the drawing length that will represent 80 m on the ground?

- A. 800 cm
C. 8 cm
B. 80 cm
D. 8000 cm

23. Change $6\frac{2}{5}$ into an improper fraction.

- A. $\frac{5}{32}$
B. $\frac{30}{5}$
B. $\frac{5}{30}$
D. $\frac{32}{5}$

24. What is the value of y in the following factor tree?



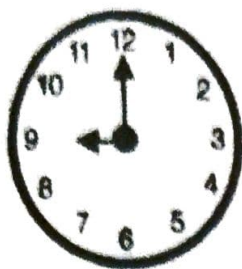
- A. 3
C. 2
B. 9
D. 18

25. Weeks Days

7	4
- 3	6

- A. 11 weeks 3 days
B. 4 weeks 5 days
C. 3 weeks 8 days
D. 3 weeks 5 days

26. What is the time in the clock shown below?



- A. 9.00 o'clock
B. 12.45 o'clock
C. 12.00 o'clock
D. 11.45 o'clock
27. Which of the following numbers is divisible by 3 and 9?

A. 1008 B. 222
C. 33 D. 903

28. What is the L.C.M of 12 and 18?

A. 42 B. 36
C. 30 D. 6

29. What is the total number of days in the month of May and September?

A. 62 B. 60
C. 61 D. 39

30. How many millimeters are there in 2 1/4 litres?

A. 2100 ml B. 2250 ml
C. 2140 ml D. 2400 ml

31. Add

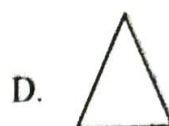
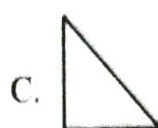
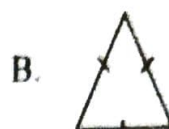
sh	ct
78	20
1	60
+9	70
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A. sh 100 70 ct
B. sh 89 70 ct
C. sh 109 60 ct
D. sh 88 170 ct

32. Calculate the area of a square whose sides are 12 cm.

A. 144 cm²
B. 24 cm²
C. 48 cm²
D. 144 cm

33. Which of the following is an equilateral triangle?



34. Arrange in ascending order.

$\frac{1}{8}, \frac{1}{2}, \frac{1}{4}, \frac{1}{3}$

A. $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{8}$

B. $\frac{1}{2}, \frac{1}{8}, \frac{1}{4}, \frac{1}{3}$

C. $\frac{1}{2}, \frac{1}{3}, \frac{1}{8}, \frac{1}{4}$

D. $\frac{1}{8}, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}$

35. Which of the following angles is the largest?

A. Reflex
C. Obtuse

B. Right
D. Acute

36. What is the approximate mass of a newly born baby?

A. 3g
C. 3 kg

B. 30 kg
D. 300 kg

37. Ali bought 48 packets of biscuits. If each packet weighed 1/4kg, what is the total mass he bought in kilograms?

A. 96 kg
C. 12 kg

B. 192 kg
D. 24 kg

38. Amina left Wajir at 9.00 a.m and arrived Nairobi at 2.00 p.m. How many hours did her journey take?

A. 5 hours
C. 7 hours

B. 11 hours
D. 4 hours

39. Multiply 13 km 200 m by 8

- A. 105 km 600 m
- B. 104 km 1600 m
- C. 13 km 1600 m
- D. 14 km 600 m

40. A family uses $2\frac{1}{2}$ litres of milk everyday. How many litres does the family use in 2 weeks?

- A. 5 L
- B. $17\frac{1}{2}$ L
- C. 25 L
- D. 35 L

41. If the year 2000 was a leap year. How many other leap years are there before 2010?

- A. 2
- B. 3
- C. 4
- D. 1

42. Find the value of X if; $\frac{2}{7} = \frac{X}{21}$

- A. 4
- B. 6
- C. 14
- D. 8

43. Muturi was sent to buy the following items;

2 kg sugar @ sh 70

$\frac{1}{2}$ kg meat at sh 100 per kg

4 kg cooking fat @ sh 70

3 kg wheat flour each sh 60 per kilo

If he paid using a one thousand shilling note, how much balance did he receive?

- A. sh 650
- B. sh 350
- C. sh 630
- D. sh 1700

44. In a parent's meeting, the number of men who attended was 413 women 642 and 13 more children than men. How many people were in the meeting?

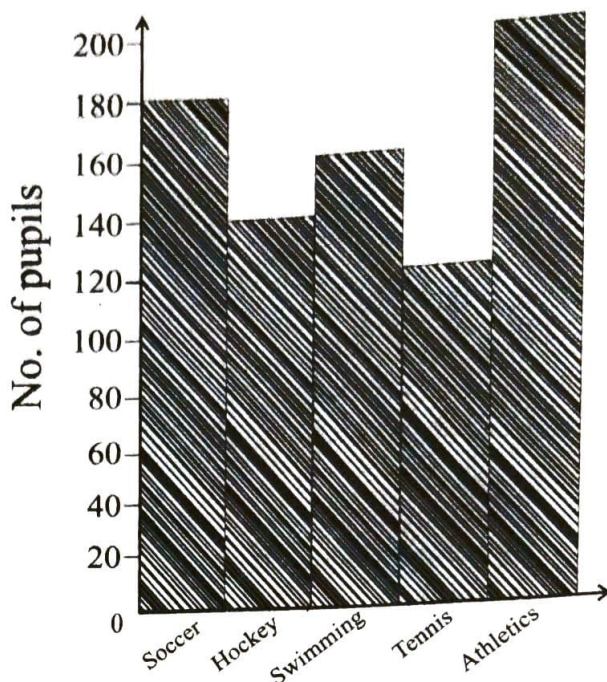
- A. 1068
- B. 1481
- C. 1710
- D. 1042

45. Work out

h	min	s
2	30	10
x		3

- A. 6 h 90 min 30 s
- B. 7 h 30 min 30 s
- C. 8 h 30 min 30 s
- D. 9 h 60 min 30 s

The graph below shows the favourite games for pupils in Amanda school. Use it to answer questions 46 - 49.



46. Which one is the most liked game in school?

- A. Tennis
- B. Athletics
- C. Soccer
- D. Hockey

47. Which game is least liked by the pupils?

- A. Soccer
- B. Tennis
- C. Hockey
- D. Athletics

48. How many more pupils like athletics than tennis?

- A. 200
- B. 120
- C. 80
- D. 320

49. What is the total number of pupils in the school?

- A. 320
- B. 600
- C. 480
- D. 800

50. What is the next shape in the pattern below?



- A.
- B.
- C.
- D.