



MATHEMATICS

School Level Examination

GRADE

8

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- * All questions are compulsory.
- * Read the instructions on the **ANSWER SHEET** and fill in your **NAME, CLASS and OTHER INFORMATION**.

To mark your choice of answer by darkening the circles in the Answer Sheet, use an **HB Pencil** only.

- * You **MUST** record your answers on the **ANSWER SHEET**.
- * There are 40 **MULTIPLE CHOICE QUESTIONS**. Use the information provided to choose the **BEST** answer among the four possible options.

On your **ANSWER SHEET** fill in the oval that matches your answer.

- * Marks are **NOT** deducted for incorrect answers.
- * Return the **Answer Sheet** to the invigilator at the end of the examination.
- * Write your Roll No. on the Question Paper too and take it home for future reference.
- * You are **NOT** allowed to use a calculator.

You may use a ruler and spare paper for rough work.

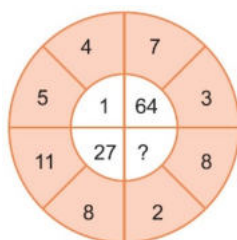
Section - A

(This section contains 8 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which only ONE is correct)

1. Which of the following options will fit in the given series?



- (A) 6 (B) 7
(C) 9 (D) 12
2. If in a certain language, DELHI is coded as EFMIJ, how is ODISHA coded in that language?
(A) PEJUJB (B) NCHRG
(C) PEJTIB (D) QFKUJC
3. Find the missing number in the given figure _____.



- (A) 64 (B) 125
(C) 216 (D) 512
4. Keshav is 40 m South-West of Nikhil. Aman is 40 m South-East of Nikhil. Then Aman is in which direction of Keshav?
(A) East (B) West
(C) North-East (D) South
5. If + means \times , - means \div , \times means - and \div means +, then, $6 \div 36 - 4 \times 2 + 2 = ?$
(A) 6 (B) 12
(C) 11 (D) 17

6. L is the brother of M and N. O is N's mother. T is L's father. Which of the following statements CANNOT be definitely true?

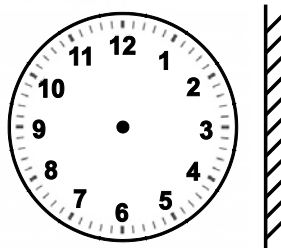
- (A) O is M's mother (B) M is T's father
 (C) T is M's father (D) L is O's son

7. What values of l and m will make the given square a magic square with sum of each column, row and diagonal as 81?

	m	30
31		
	l	28

- (A) $l = 24$ $m = 26$ (B) $l = 29$ $m = 25$
 (C) $l = 28$ $m = 30$ (D) $l = 25$ $m = 29$

8. If a clock shows 8 hours 40 minutes then what time does its mirror image show?



- (A) 3 hours 20 minutes (B) 4 hours 20 minutes
 (C) 10 hours 60 minutes (D) 11 hours 60 minutes

Section - B

(This section contains 25 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which only ONE is correct).

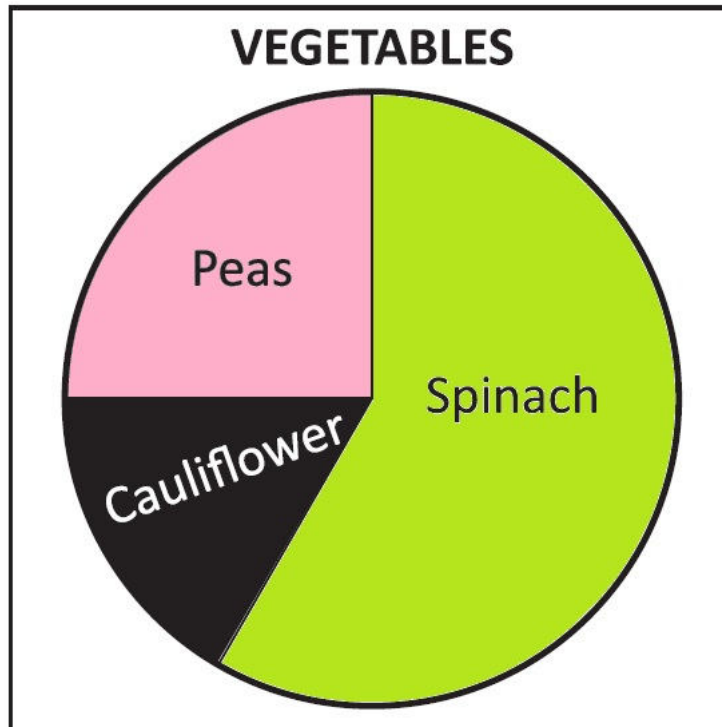
9. If $\sqrt[3]{480} = \sqrt[3]{a} \times 2 = \sqrt[3]{20}$, then the value of 'a' is _____.

- (A) 3 (B) 4
 (C) 5 (D) 6

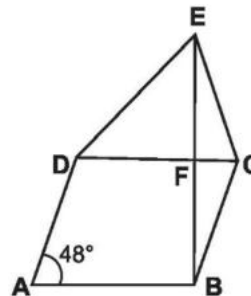
10. If $(2^{3x-1} + 10) \div 7 = 6$, then x is equal to _____.

- (A) 0 (B) -1
 (C) 2 (D) 3

11. The pie chart shows the number of vegetables sold in a store. Given that the number of spinach is 420 and number of peas is 200, then the value of cauliflower in degrees is _____.



- (A) 90° (B) 81°
 (C) 72° (D) 59°
12. ABCD is a rhombus and DEC is an equilateral triangle. If $\angle BAD = 48^\circ$, then $m(\angle BEC)$ and $m(\angle BFC)$ are respectively.



- (A) $36^\circ, 96^\circ$ (B) $36^\circ, 100^\circ$
 (C) $96^\circ, 100^\circ$ (D) $48^\circ, 96^\circ$
13. A square room having one side equal to 12 m is to be paved with square tiles of side 50 cm. The number of tiles required to pave the room is _____.
- (A) 24 (B) 288
 (C) 576 (D) 600
14. The factors of $(x + 2)(x^2 + 25) - 10x^2 - 20x$ are _____.

- (A) $(x - 2), (x + 5)^2$ (B) $(x + 2), (x - 5)$
 (C) $(x - 5), (x - 3)^2$ (D) $(x + 2), (x - 5)^2$

15. Which of the following numbers is divisible by 11?


- (A) 475329112721 (B) 589329112071
 (C) 567589333894 (D) 574985217951

16. Which of the following statements is true?

- (A) $0 \div \frac{9}{3} = 0$ (B) $\frac{-5}{2} \div 0 = 0$
 (C) $(1)^{\frac{-7}{9}} = \frac{-7}{9}$ (D) $\frac{-8}{4} - \frac{3}{2} = \frac{-3}{2} - (\frac{-8}{4})$

17. Manoj's father is 26 years younger than Manoj's grandfather and 29 years older than Manoj. The sum of the ages of all three is 135 years. The present age of Manoj's grandfather is _____.

- (A) 17 years (B) 46 years
 (C) 55 years (D) 72 years

18. Which of the following solid shapes has the side view as ?

- (A)  (B) 
 (C)  (D) 

19. Amit bought a food processor for ₹ 8000 including the VAT at 15%. Find the price of food processor before the VAT was added to it.



- (A) ₹ 6800 (B) ₹ 6956.52
 (C) ₹ 6900.10 (D) ₹ 7000

20. Three solid cubes of sides 6 cm, 8 cm and 10 cm are melted to form a new cube. Find the surface area of the cube so formed.

- (A) 860 cm^2 (B) 864 cm^2

(C) 865 cm^2

(D) 866 cm^2

21. Between which two consecutive whole numbers does $\sqrt{1587}$ lie?

(A) 39 and 40

(B) 35 and 36

(C) 40 and 41

(D) None of these

22. The side of an equilateral triangle is $(-5x + 9)$ cm. Which of the following expression gives its perimeter?

(A) $(15x + 27)$ cm

(B) $(-10x + 18)$ cm

(C) $(12x + 15)$ cm

(D) $(-15x + 27)$ cm

23. A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25%. If C pays ₹ 1,500, what did A pay for it?



(A) ₹ 1,000

(B) ₹ 1,100

(C) ₹ 1,200

(D) ₹ 1,250

24. If $3a + 5b = 28$ and $3a - 5b = 8$, then the value of ab is

(A) 2

(B) 6

(C) 10

(D) 12

25. The ordinate of a point is its distance from the _____.

(A) origin

(B) x-axis

(C) y-axis

(D) None of these

26. What must be subtracted from $4p(10r - 3q + 2p)$ to get $5p^2 + 25pr$?

(A) $p - 4q + 5r$

(B) $3p(p - 4q + 5r)$

(C) $3p(p - 4q - 5r)$

(D) $3p(p + 4q - 5r)$

27. Two dice are tossed. The probability that the total score is the prime number is _____.

(A) $\frac{1}{2}$

(B) $\frac{1}{6}$

(C) $\frac{5}{12}$

(D) $\frac{7}{9}$

28. A two-digit number whose ones digit is x and tens digit is y , is _____.

(A) $10x + y$

(B) $10y + x$

(C) $10y - x$

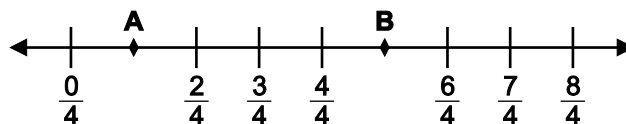
(D) xy

29. Is it possible to construct a quadrilateral ABCD in which $AB = 5$ cm, $BC = 7.5$ cm, $\angle A = 80^\circ$, $\angle B = 140^\circ$ and $\angle C = 145^\circ$?
- (A) Yes (B) May be constructed
(C) Cannot say anything (D) Not possible
- 30.
- Two cars P and Q start at the same time in opposite directions from two points and arrive at the points in $8\frac{1}{6}$ hours and $4\frac{1}{6}$ hours respectively. At what rate does the second car Q travel if the first car P travels at the speed of 42 km/h?
- (A) 58 km/h (B) 58.8 km/h
(C) 59 km/h (D) 59.8 km/h
31. The radius of the base and the height of a right circular cylinder are each increased by 10%, then the volume of the cylinder is increased by _____.
- (A) 45% (B) 42%
(C) 33.1% (D) 30%
32. The rational number which is not lying between $-\frac{1}{3}$ and $\frac{1}{2}$.
- (A) $\frac{1}{6}$ (B) $\frac{1}{3}$
(C) $\frac{2}{3}$ (D) $-\frac{1}{6}$
33. The compound interest on a certain sum for 2 years at 10% per annum is ₹ 3150. What is the sum?
- (A) ₹ 5000 (B) ₹ 8000
(C) ₹ 10,000 (D) ₹ 15,000

Section - C

(This section contains 7 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which TWO are correct).

34. Find the rational number denoted by points A and B on the number line.



- (A) $\frac{3}{4}$ (B) $\frac{1}{4}$
(C) $\frac{5}{4}$ (D) 0.25

35. The value of $\sqrt[3]{\frac{17576}{2197}} - \sqrt[3]{\frac{15625}{8000}}$ is _____.

- (A) $\frac{3}{4}$ (B) $\frac{20}{15}$
(C) $\frac{39}{52}$ (D) $\frac{4}{3}$

36. Choose the incorrect statements.

- (A) The lower limit of class 10 – 20 is 20.
(B) The data arranged in ascending or descending order of size is called data array.
(C) There is no difference between bar graph and histogram.
(D) The class mark of 25 – 35 is 30.

37. The least values of x and y so that the number $5x423y$ is divisible by 88.

- (A) $x = 5$ (B) $x = 8$
(C) $y = 5$ (D) $y = 2$

38. The rational form of 4.90625 _____.

- (A) $\frac{147}{32}$ (B) $\frac{157}{32}$
(C) $\frac{785}{160}$ (D) $\frac{735}{160}$

39. If $4x^2 + 9y^2 = 40$ and $xy = 2$, then the value of $2x + 3y$ is _____.

- (A) 8 (B) -8
(C) 16 (D) -16

40. 35 equally priced scarfs cost ₹ x . How much do 7 scarfs cost?



- (A) ₹ $\frac{35}{7}x$ (B) ₹ $35x$
(C) ₹ $\frac{1}{5}x$ (D) ₹ $\frac{7}{35}x$

Acknowledgement

Copyright in this booklet is owned by Orange Education Pvt Ltd, unless otherwise indicated. Every effort has been made to trace and acknowledge copyright. Orange Education Pvt Ltd apologises for any accidental infringement and welcome information to redress the situation.

For more information, please visit our website: www.orangeeducation.in



Website: www.orangeeducation.in



@OrangeEducationPvtLtd