GRADE 8

QUESTIONS **50**

TOTAL MARKS **100**

DURATION **60 mins**

Instruction for Students:

➲ Read the question carefully before answering.

➲ Each question has 4 options (A, B, C & D).

➲ **Grand Finale Marking System:-**
Each correct answer carries 2 marks.
For each unattempted question, 2 marks will be deducted.
For each wrong answer, 2.5 marks will be deducted.

➲ Grand Finale Result will be declared Online after 45 days from the exam date. To know your Result, login to www.neltas.com and use given Seat Number.

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1. **The additive inverse of $\dfrac{-2}{3}$ is _____**

   (A) $\dfrac{11}{2}$

   (B) $\dfrac{2}{3}$

   (C) $\dfrac{4}{5}$

   (D) None of these

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2. **If $(5)^{x+1} = (25)^{x-2}$, find x.**

   (A) 5
   (B) 4
   (C) 3
   (D) 2

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3. **$\sqrt{72.25}$ = _____**

   (A) 7.5
   (B) 6.5
   (C) 9.5
   (D) 8.5

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4. **If A and B are disjoint sets, then A - B = _____**

   (A) A
   (B) B
   (C) A U B
   (D) None of these

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5. **$(-1)^3$ = _____**

   (A) 1
   (B) 0
   (C) -1
   (D) None of these

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6. If 23X is divisible by 3, what are the possible values of X?
(A) 1, 3, 5, 7, 9
(B) 1, 4, 7, 9
(C) 1, 4, 7
(D) None of these

7. The alphabet from the given options that doesn't have a line of symmetry is _____.
(A) B
(B) X
(C) H
(D) L

8. A borrowed ₹(5x + 3y) from B. B asked A to return ₹(7x + 4y). How much did B gain?
(A) ₹(2x − y)
(B) ₹(2x + 2y)
(C) ₹(2x + y)
(D) ₹(x + 2y)

9. Factorise: $15abc - 5a^2 b^2$
(A) 5abc(3 - ab)
(B) 5ab(3c - ab)
(C) 5bc(3a - ac)
(D) None of these

10. Find two consecutive even numbers such that two-fifths of the smaller number exceeds two-elevenths of the larger number by 4.
(A) 18, 20
(B) 20, 22
(C) 22, 24
(D) None of these

11. I am three times as old as my son. After five years, I will be $2\dfrac{1}{2}$ times as old as my son. Find my present age and the present age of my son.
(A) 36, 12
(B) 39, 13
(C) 45, 15
(D) None of these

12. If $6x^2 - 48x - 54 = 0$, x = _____
(A) 9, - 1
(B) 8, - 2
(C) 9, - 2
(D) None of these

13. Add the polynomials:
$a^2 - ab + b^2$ and $5a^2 + 6b^2$
(A) $6a^2 + 7b^2$
(B) $-ab + 6a^2 + 7b^2$
(C) $2ab + 6a^2 + 7b^2$
(D) None of these

14. The compound interest on a sum of ₹1,000 at 5% interest for 2 years is _____
(A) ₹120.5
(B) ₹102.5
(C) ₹102
(D) ₹120

15. The food bill at the canteen was ₹400.
If I gave a tip of 20% to the waiter, how much money did I spend in total?
(A) ₹460
(B) ₹480
(C) ₹500
(D) ₹520

16. **By which of the following criterion two triangles cannot be proved congruent?**
    (A) AAA   (B) SSS
    (C) SAS   (D) ASA

17. **What is the area of a circle with diameter 14 cm?**
    (A) 154 cm^2
    (B) 44 cm^2
    (C) 1,540 cm^2
    (D) None of these
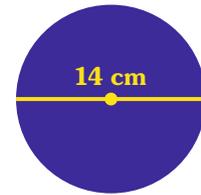
18. **A rectangular garden has length of (x+2) cm, width of (x+1) cm and an area of 42 cm^2. Find the perimeter of this garden.**
    (A) 22 cm
    (B) 24 cm
    (C) 26 cm
    (D) 28 cm
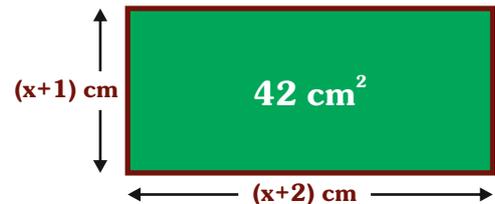
19. **Volume of a cylinder with radius 5 m and height 59.5 m is _____ m^3**
    (A) 4875
    (B) 4675
    (C) 4775
    (D) None of these
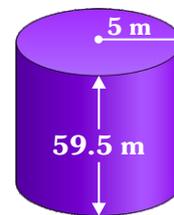
20. **The following figure has _____ lines of symmetry.**
    (A) 1
    (B) 0
    (C) 3
    (D) 2

21. **One of the angles of the parallelogram is 80°.**
Find the measures of remaining angles of the parallelogram.
    (A) 100°, 80°, 100°
    (B) 90°, 90°, 90°
    (C) 100°, 90°, 80°
    (D) 100°, 70°, 80°

22. **What should be multiplied with $\dfrac{-4}{5}$ so as to get $\dfrac{6}{15}$?**
    (A) $\dfrac{-1}{2}$ (B) $\dfrac{-3}{5}$
    (C) $\dfrac{5}{6}$ (D) None of these

23. **Say True or False: $2^{-3} \times 2^{2} = 2$**
    (A) TRUE   (B) FALSE
    (C) Can't say   (D) None of these

24. **-12 - (-8) = _____**
    (A) -20
    (B) -4
    (C) 4
    (D) 0

25. Which of the following square numbers is the square of an odd number?
  (A) 289   (B) 400
  (C) 900   (D) 1600

26. What is the smallest number that when multiplied by 1323 gives a perfect cube?
  (A) 5   (B) 7
  (C) 9   (D) 11

27. Find values of A and B.

$$\begin{array}{cc} & A\ B \\ \times & B \\ \hline A\ A\ 4 \end{array}$$

  (A) 6, 2
  (B) 8, 2
  (C) 2, 8
  (D) 2, 6

28. The capital letter of the alphabet O has _____ lines of symmetry.
  (A) 2   (B) 4
  (C) 1   (D) None of these

29. $3p \times (4a + 3b) =$ _____
  (A) $9bp + 12ap$
  (B) $12pa - 9pb$
  (C) $12ap + 12bp$
  (D) $9bp + 14ap$

30. Factorise: $(a+b)^2 - 64$
  (A) $(a+b+6)(a+b-6)$
  (B) $(a+b+4)(a+b-4)$
  (C) $(a+b+8)(a+b-8)$
  (D) $(a+b+8)(a+b+8)$

31. Solve for x:
  $0.3(6 - x) = 0.4(x + 8)$
  (A) $x = 0.2$
  (B) $x = -2$
  (C) $x = 2$
  (D) $x = -0.2$

32. The sum of two numbers is 50 and their difference is 22. Find the numbers.
  (A) 12, 38   (B) 14, 36
  (C) 16, 34   (D) None of these

33. The product of two positive numbers is equal to 2 and their difference is equal to $\frac{7}{2}$.
Find the two numbers.
  (A) $\frac{1}{2}$ and 4   (B) $\frac{1}{2}$ and 6
  (C) $\frac{1}{3}$ and 4   (D) $\frac{1}{3}$ and 6

34. Subtracting $7z - 5y + 9$ from 10 gives _____
  (A) $1 + 7z - 5y$
  (B) $1 - 7z + 5y$
  (C) $1 - 7z - 5y$
  (D) $7z - 5y$

35. Calculate the total amount when ₹7,500 is compounded at 6% annually for 2 years.
  (A) ₹8,667   (B) ₹8,427
  (C) ₹7,667   (D) ₹7,427

36. Volume of a cube is _____
  (A) side x side
  (B) 3 x side
  (C) $(side)^3$
  (D) None of these
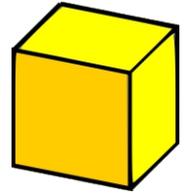
37. True or False: A circle of radius 10 cm and a square of side 10 cm are congruent.
  (A) TRUE
  (B) FALSE
  (C) Cannot say
  (D) None of these
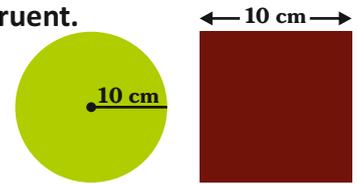
38. Perimeter of a circle is _____
  (A) $4\prod r$
  (B) $2\prod d$
  (C) $\prod d$
  (D) $3\prod r$
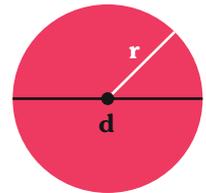
39. If diagonal of a square is $9\sqrt{2}$ cm, find the perimeter.
  (A) 49 cm
  (B) 81 cm
  (C) 36 cm
  (D) 54 cm
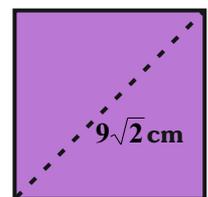
40. Total surface area of a cube of side 9 cm is _____ cm^2
  (A) 586
  (B) 486
  (C) 476
  (D) 576
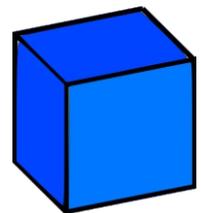
The pie chart given below shows the percentages of the shoe sizes for a group of 800 students.
Answer questions 41 to 43 based on this data:

Size 8 10% | Size 7 15% | Size 5 45% | Size 6 30%
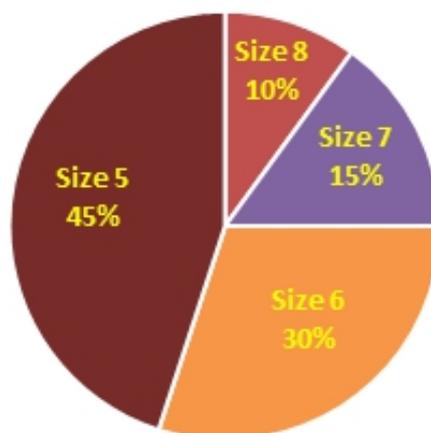
41. How many students in this group have shoe size 7?
  (A) 120   (B) 130
  (C) 110   (D) 115

42. How many students in this group do not have shoe size 8?
 (A) 420   (B) 320
  (C) 520   (D) None of these

**43.** **How many students in this group have sizes 5 or 6?**
- (A) 400
- (B) 500
- (C) 700
- (D) 600

44. **I bought 17 dresses at ₹5,100. How many more dresses can be bought for ₹7,500?**
- (A) 7
- (B) 8
- (C) 9
- (D) 10

If U = {1, 2, 3, 4, 5, 6, 7, 8, 9}, A = {2, 4, 6, 8}, B = {1, 3, 8, 9}.
Answer the questions 45, 46 and 47 based on this.

45. **n(A U B) = _____**
- (A) 8
- (B) 7
- (C) 6
- (D) 5

46. **A' ∩ B = _____**
- (A) {1, 3, 8, 9}
- (B) {1, 8, 9}
- (C) {1, 3, 7, 9}
- (D) {1, 3, 9}

47. **n(A U B)' = _____**
- (A) 1
- (B) 2
- (C) 0
- (D) None of these

48. **On reflecting the point P(-1, -1) across the Y-axis we get _____**
- (A) (1, - 1)
- (B) (-1, 1)
- (C) (-1, -1)
- (D) None of these

49. **A circular garden with a diameter of 10 meters is surrounded by a walkway of width 1 meter.**
Find the area of the walkway.
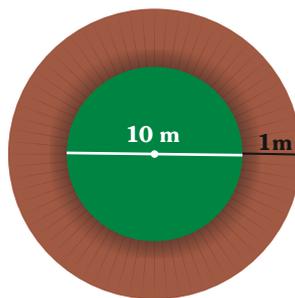
- (A) $23 \prod m^2$
- (B) $25 \prod m^2$
- (C) $11 \prod m^2$
- (D) None of these

50. **ΔABC ≅ ΔPRQ, AB = 5 cm, BC = 6 cm and AC = 7 cm, what is the length of QR?**
- (A) 5 cm
- (B) 6 cm
- (C) 7 cm
- (D) Cannot be determined
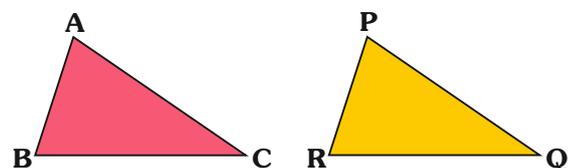
ANSWERS

1	2	3	4	5	6	7	8	9	10
B	A	D	A	C	C	D	C	B	B

11	12	13	14	15	16	17	18	19	20
C	A	B	B	B	A	A	C	B	B

21	22	23	24	25	26	27	28	29	30
A	A	B	B	A	B	C	D	A	C

31	32	33	34	35	36	37	38	39	40
B	B	A	B	B	C	B	C	C	B

41	42	43	44	45	46	47	48	49	50
A	D	D	B	B	D	B	A	C	B