SET - II

SUMMATIVE ASSESSMENT - I - 2016-2017
MATHEMATICS - Paper - 1
(English Version)
PART - A & B

Class : IX **Max. Marks : 40** **Time : 2:45Hrs.**

Marks : 30 **Part - A**

Instructions:

1. **15 minutes of time is alloted for reading the question paper.**
2. **Answer ALL questions.**
3. **Answer for questions under Part-A should be written in a separate answer book.**
4. **There is internal choice for questions in Section-III, Part-A.**

SECTION - I

Note:

(i) Answer all questions.

(ii) Each question carries 1 mark. **4 x 1 = 4 Marks**

1. Find an irrational number between 4 and 5.
2. Check whether $(\sqrt{3}+\sqrt{2})^2$ is rational or irrational.
3. Is 3 a zero of the polynomial $X^2 + 2X - 15$? Give reason.
4. Lakshman scored 10 more runs than Kohili. Their total score is 140 runs. Express this information in the form of an equation.

SECTION - II

Note:

(i) Answer all questions.

(ii) Each question carries 2 marks. **5 x 2 = 10 Marks**

5. Find the value of $\sqrt{5}$ upto 3 decimal places.
6. Evaluate 102 x 98 value without actual multiplication.

7. The cost of a Pencil is Rs. 3 and a ball point pen is Rs. 20. Ravi paid Rs. 150 for the Pencils and Pens he purchased. Express the information as a linear equation.

8. Give possible values for length and breadth of rectangle whose area is $x^2 - 3x + 2$

9. Area of rectangular part is 180m^2. If its width is $5\sqrt{3}$ m. Find its Perimeter?

SECTION - III

Note:

1. **Answer all the questions.**
2. **Choose any one from each question.**
3. **Each question carries 4 marks.** **4 x 4 = 16 Marks**

10. (a) If 'a' and 'b' are rational numbers find the value of 'a' and 'b', so that

$$\frac{\sqrt{5} + \sqrt{3}}{2\sqrt{5} - 3\sqrt{3}} = a - b\sqrt{15}$$

(OR)

(b) If 0 and 1 are the zeroes of the polynomial $f(X) = 2X^3 - 3X^2 + aX - b$, find the values of 'a' and 'b'.

11. (a) If the polynomials $X^3 + aX^2 + 5$ and $X^3 - 2X^2 + a$ are divided by $X + 2$ leave the same remainder. Find the value of 'a'.

(OR)

(b) Find the value of 'k', if $X = 2$, $Y = 1$ is a solutions of the equation $3X+4Y=k$. Find two more solutions of the resultant equation.

12. (a) Verify whether $2X^4 - 6X^3 + 3X^2 + 3X - 2$ is divisible by $X^2 - 3X + 2$ or not? How can you verify using Foctor Theorem.

(OR)

(b) Check which of the following is a solution of the equation $x + 2y = 4$.

(i) $\left(0, \frac{4}{2}\right)$ (ii) $\left(\frac{8}{2}, 0\right)$

(iii) $\left(-2, 3\right)$ (iv) $\left(\sqrt{2}, 2\sqrt{3}\right)$

13. (a) Visualise 2.884 on the number line, using successive magnification.

(OR)

(b) Draw the graph of the equation $2x + 3y = 11$. Mark the point on the line whose x co-ordinate is '1'.

SET - II

SUMMATIVE ASSESSMENT - I - 2016-2017
MATHEMATICS -Paper - 1
(English Version)

Class : IX **PART - B**

Name of the Student :..... Roll No: .....

	AS-1						AS-2				AS-3			AS-4			AS-5		Total	Grade
Q.No	1	5	6	10	11	14 to 23	2	3	12	20 to 23	4	7	24, 25	8	9	26 to 29	13	30 to 33		
Marks																				
Total																				

Marks : 10 **Part - B**

Instructions:

1. **Answer all the questions in Part-B.**
2. **Each question has 4 options. Write the capital letter indicating the answer in the given brackets.**
3. **Marks are not awarded for over writing answers.**
4. **All questions carry equal marks.**

SECTION - IV

Instructions:

1. **Answer all the questions.**
2. **Each question carries ½ mark.** **20 x ½ = 10 Marks**

14. If $X^2 = 441$ then the positive value of X **[ ]**

A) -21 B) 21 C) $\pm$ 21 D) $\sqrt{21}$

15. Find the rational number between 'a' and 'b' **[ ]**

A) $\frac{ab}{2}$ B) $\frac{a - b}{2}$ C) $\frac{a^2 - b^2}{2}$ D) $\frac{a + b}{2}$

16. The zeroes of the polynomial $P(X) = X^2 - 5X + 6$ is **[ ]**

A) 0, 2 B) 2, 0 C) 2, 3 D) -2, -2

17. Calculate the value of X if $y = 0$ in the equation $4X + y = 9$ [ ]

A) $\frac{4}{9}$ B) $\frac{9}{4}$ C) $2\frac{1}{4}$ D) Both B and C

18. If $P(X)$ is divided by the linear polynomial $aX + b$, then the remainder. [ ]

A) $P(a)$ B) $P(b)$ C) $P(\frac{-b}{a})$ D) $P(\frac{b}{a})$

19. Write the equation of the line parallel to y - axis and passing through the point (-4, -3) [ ]

A) $y = -3$ B) $y = -4$ C) $X = -4$ D) $X = 4$

20. If $\sqrt{3} + \sqrt{5}$ is an irrational, then which of the following is true. [ ]

A) 3 and 5 are not composite B) 3 or 5 is prime

C) 3 and 5 are prime D) All the above

21. If $\sqrt{X} = y \times Z$ then [ ]

A) y is rational, Z is irrational B) y is irrational, Z is rational

C) y and Z are real numbers D) A and B are correct.

22. A point on the line $5X - 3y = 6$ is [ ]

A) (0, -2) B) (-2, 0) C) (-2, -2) D) (2, 2)

23. If $p(X) = X^2+5X+6$ and $g(X) = X^2+7X+4$ have a common factor then [ ]

A) $p(X) \neq g(X)$ B) $p(X) = g(X)$ C) $\frac{p(X)}{g(X)} \neq 0$ D) All the above

24. Match the following. [ ]

1) $(a+\sqrt{b})(a-\sqrt{b}) =$	[ ]	p) $a+b+2\sqrt{ab}$
2) $(\sqrt{a}+\sqrt{b})^2 =$	[ ]	q) $a^2 - b$
3) $(\sqrt{a}+\sqrt{b})(\sqrt{c}+\sqrt{d}) =$	[ ]	r) $\sqrt{ac} + \sqrt{ad} + \sqrt{bc} + \sqrt{cd}$

A) 1r, 2p, 3q B) 2r, 1p, 3q C) 1q, 2p, 3r D) 1q, 2r, 3q

25. Order of the polynomial $\frac{5}{4}x^4 + 7x^3y^2 - 9xy^3 + y^4$ [ ]

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

26. If the diagnoal of a square is 8 units, then its side is ____ units [ ]

A) $3\sqrt{2},$ B) 5 C) $4\sqrt{2}$ D) 4

27. If the radius of the circular disc is $\frac{7}{\sqrt{2}}$ units. Then what is perimeter of the disc [ ]

A) 77units B) $18\sqrt{2}$ units C) 12units D) $22\sqrt{2}$ units

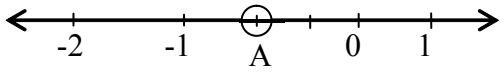
28. If x = 2-a, Y = 2+a, is a solution of the equation 3x-2y+6 = 0.
Then the value of 'a' is [ ]

A) $\frac{8}{5}$ B) $\frac{-8}{5}$ C) $\frac{5}{8}$ D) $\frac{-5}{8}$

29. The cost of of 6 Pens and 5 Pencils is Rs. 80. Write this information in linear equation form. [ ]

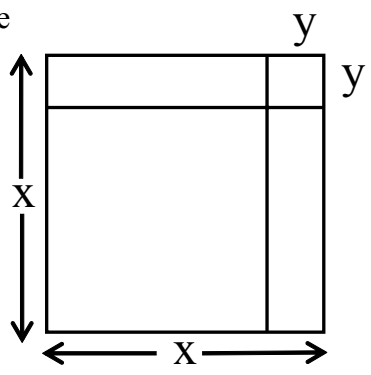
A) 6p+5q = 80 B) 5p+6q = 80 C) 5p-6q = 80 D) 6p-5q = 80

30. Point 'A' on the number line represents [ ]



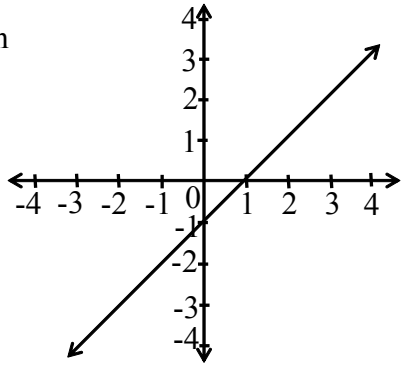
A) $\frac{-2}{3}$ B) $\frac{-3}{4}$ C) $\frac{-1}{2}$ D) $\frac{1}{4}$

31. Vizuvalize x - y in the adjacent figure [ ]



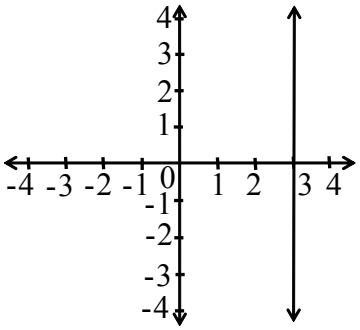
A) Length of inner larger square
B) Length of inner small square
C) Length of the rectangle
D) Breadth of the rectangle

32. Which pair of points lie on the graph [ ]



A) (0, 1), (-1, 0)
B) (0, -1), (1, 0)
C) (-1, 1), (1, -1)
D) (0, -1), (-1, 0)

33. The graph is represented by [ ]



A) $x = 3$ B) $y = 3$
C) $x = 2, y = 2$ D) Both A and B