APS/08SA-1/15-16/041

Class: VIII

Subject: Mathematics

Time: 3 hours

Max Marks: 100

General Instruction

❖ The question paper consists of 37questions
❖ Section A comprises of 10 questions of 1 mark each
❖ Section B comprises of 5 questions of 2 marks each
❖ Section C comprises of 12 questions of 3 marks each
❖ Section D comprises of 6 questions of 4 marks each
❖ Section E comprises of 4 questions of 5 marks each

Section A

Q1 -10 Choose the correct answer.

Q1. The diagonals of this quadrilateral are perpendicular bisectors of each other

    a. kite   b. rhombus   c. trapezium   d. rectangle

Q2. The multiplicative inverse of 7/5 is

    a. 5/7   b. -5/7   c. -7/5   d. 0

Q3. The solution of equation $3x - 9 = 0$ is

    a. 3   b. 0   c. -3   d. 1/3

Q4. The number of rational numbers between two rational numbers is

    a. 1   b. infinite   c. 100   d. 0

Q5. The unit digit of the square of 1234 will be

    a. 1   b. 4   c. 6   d. 8

Q6. The angle sum of a convex polygon with 10 sides is

    a. 360°   b. 1080°   c. 1440°   d. 900°

Q7. The polygon having 8 sides is called

    a. Decagon   b. octagon   c. heptagon   d. hexagon

Q8. The square of which of the following numbers would be odd number:

    a. 432   b. 286   c. 779   d. 168

Q9. All rhombuses are

    a. Parallelograms   b. squares   c. rectangles   d. all of these

Q10. The minimum interior angle possible for a regular polygon is

   a. 30°   b. 60°   c. 45°   d. 120°

Section B

Q11. Find the length of the side of a square whose area is 625 m².

Q12. Find the number of the sides of a regular polygon whose each exterior angle has a measure of 45°.

Q13. Solve $5x + 9 = 5 + 3x$

Q14. Find five rational numbers between 3/5 and 3/4.

Q15. What is the probability of getting an ace from a well shuffled deck of 52 playing cards?

Section C

Q16. Find the square root of the following:

  i)   625   ii) 7.29

Q17. PQRS is a rectangle. Its diagonals meet at O. Find x, if OP $=2x + 4$ and OS $= 3x + 1$

Q18. Solve $\dfrac{9x}{7-6x} = 15$

Q19. Represent the numbers on the number line

  i)   7/4   ii)   -5/6

Q20. Find the perimeter of the parallelogram RENT where EN = 7 cm and RE = 12 cm.

Q21. Write a Pythagorean triplet whose one member is
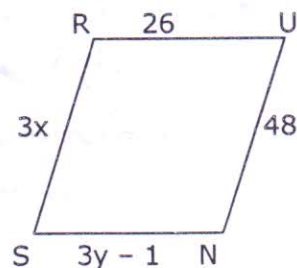
  a. 6   b. 14

Q22. Compute by using appropriate properties. Write the name of the properties used.

$$\frac{-2}{3} \times \frac{7}{8} + \frac{5}{2} - \frac{7}{8} \times \frac{1}{9}$$

Q23. The sum of three consecutive multiples of 4 is 444. Find the multiples.

Q24. RUNS is a parallelogram. Find x and y.

Q25. Find the smallest square number which is divisible by each of the numbers 6, 9 & 15.

Q26. Arnav is twice as old as Ananya. Five years ago his age was three times Ananya's age. Find their present ages.

Q27. If you have a spinning wheel with 3 green sectors, 2 blue sectors and 1 black sector, what is the probability of getting a green sector?

Section D

Q28. When a die is thrown, what will be the probabilities of the events of getting

i)   A prime number   iii) not a prime number
ii)   A number greater than 5   iv) a number not greater than 5

Q29. Present ages of Raj and Shanu are in the ratio 5:7. Eight years from now the ratio of their ages will be 3:4. Find their present ages.

Q30. The measures of two adjacent angles of a parallelogram are in the ratio 1: 2. Find the measure of each of the angles of the parallelogram.
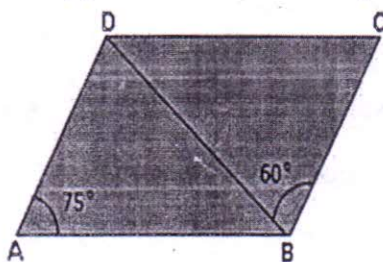
Q31. A rational number is such that when you multiply it by 3/2 and add 5/3 to the product, you get

-8/6. What is the number?

Q32. Solve $\dfrac{x+1}{2x+1} = \dfrac{3}{8}$

Q33. In the adjoining figure, ABCD is a parallelogram in which

∠BAD = 75° and ∠DBC = 60°. Calculate:

(i) ∠CDB   and   (ii) ∠ADB.

Section E

Q34. The number of the students in a hostel, speaking different languages is given below:

Language	Hindi	English	Oriya	Tamil	Guajarati	Total
Number of students	32	8	16	12	4	72

Draw a pie chart for this data.

Q35. Construct a quadrilateral OKAY.

OK = 4 cm   ∠K = 60°
KA = 5 cm   ∠A = 90°
AY = 4.5 cm

Q36. There are 2401 students in a school. P.T. teacher wants them to stand in rows and columns such that the number of rows is equal to the number of columns. Find the number of rows.

Q37.   In the below figure RISK and CLUE are two parallelograms. Find the value of x.