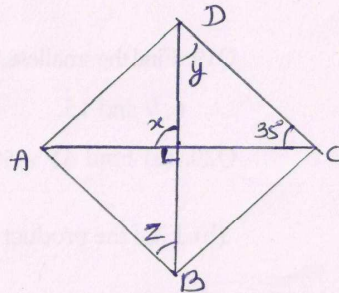Q26. Find the values of the unknowns x, y and z from the given parallelogram.

Q27. The digit of a two digit number differ by 3. If the digits are interchanged and the resulting no. is added to the original number, we get 143. What can be the original number.

Q28. On a particular day, the sales in (Rs). of different items of a baker's shop are given below

fruit bread - 80

biscuits - 120

cakes & pastries- 160

ordinary bread - 320

others - 40

Total - 720

Draw a pie chart for the given data.

Q29. Show that: $(9p - 5q)^2 + 180pq = (9p + 5q)^2$

Q30. Find the square root of 525625 by long division.

UNIT - I

Class-VIII

Mathematics

Set - A

Time: 3 hrs.   Marks: 80

Section - A

Q1 to Q 6 carry 1 mark each.

Q1. Write the reciprocal of $-1 \times \dfrac{5}{8}$.

Q2. Solve : $\dfrac{x}{x-3} = 2$

Q3. Simplify : $(-3)^4 \times \left(\dfrac{5}{3}\right)^4$

Q4. Construct an angle of 105^0 with the help of compass.
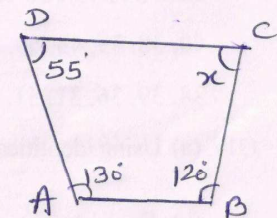
Q5. Write Pythagorean Triplet of 16.

Q6. Express 49 as the sum of 7 odd numbers.

Section - B

Q7 to Q 12 carry 2 marks each.

Q7. Find the angle measure x in the figure.

Q8. Subtract $3xy + 5yz - 7zx$ from $5xy - 2yz - 3zx$

Q9. Find square root of 9801 by prime factorization.

Q10. Two adjacent angles of a parallelogram have equal measure. Find the measure of each of the angles of the parallelogram.

Q11. The difference between the two whole no's is 64. The ratio of the two no's is 7 : 5. What are the two numbers?

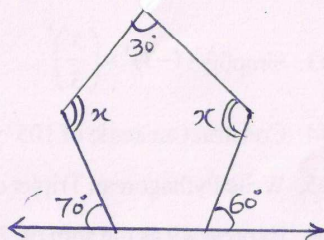Q12. Express the following numbers in standard form:

(i) 80500000   (ii) 0.00036

Section - C

Q13 to Q 22 carry 3 marks each.

Q13. Arjun is twice as old as Shriya. Seven years ago, his age was three times Shriya's age. Find their present ages.

Q14. construct a rhombus whose diagonals are 6cm and 4.5cm.

Q15. Find x in the figure.

Q16. Represent the following data into frequency distribution table using class intervals 30-35 and 35-40 etc. then draw histogram

40, 38, 33, 48, 60, 53, 51, 46, 34, 36, 49, 41, 55, 49, 64, 42, 44, 47, 38, 39, 36, 31, 51, 65, 68, 66, 61, 43, 37, 63, 45, 50, 62, 35, 32

Q17. (a) Using identities, evaluate 297×303

(b) Evaluate $\dfrac{8^{-1} \times 5^3}{2^{-4}}$

Q18. Simplify: $2(3x+1) - 5x = -2(2x+7)$

Q19. Find the smallest square number which is divisible by each of the numbers 6, 9 and 15.

Q20. (a) Find $61^2 - 59^2$ (using identity)

(b) Find the product $\left(\dfrac{-20}{3} pq^2 \right) \times \left(\dfrac{6}{5} \times p^3 q^3 \right)$

Q21. Find any three rational numbers between $\dfrac{-5}{8}$ and $\dfrac{5}{6}$

Q22. How many sides does a regular polygon have if each of its interior angles is 140^0.

Section - D

Q23 to Q 30 carry 4 marks each.

Q23. Fill in the blanks:

i) Additive inverse of $\dfrac{-7}{5}$ is _____.

ii) _____ is additive identity for addition of rational numbers.

iii) _____ has no reciprocal.

iv) _____ is multiplicative identity for rational numbers.

Q24. Solve : $\dfrac{5x+2}{3} + 1 = \dfrac{2x-3}{5}$

Q25. construct a quadrilateral MIST, where

MI = 3.5cm, IS = 6.5cm, $\angle M = 75^0$

$\angle I = 90^0$ and $\angle S = 120^0$