GRADE VIII SCHOOL

ASSESSMENT-I

TIME 2½ HOURS **MATHEMATICS** M.M. 80

Instructions:- Read the question paper carefully.

Write neatly and legibly with correct question numbers.

Attempt all questions from Section A and any five questions from Section B

All working, including rough work, must be clearly shown and must be done on the same sheet as the rest of the answer.

Omission of essential working will result in loss of marks

The intended marks for questions or parts of questions are given in brackets [].

SECTION A (40 Marks)

(Attempt all questions from this Section)

Question:1 Choose the correct answers to the questions from the given options:

1) $a^2 - b^2 = ?$

a) (a - b) (a + b)

b) (a - b) (a - b)

c) (a + b) (a + b)

d) none of these

ii) If d % is the rate of the discount then:-

a) S.P. = $(1 - \frac{d}{100})$ M.P.

b) S.P. = $(1 + \frac{d}{100})$ M.P.

c) S.P. = $(1 - \frac{d}{100})$ + M.P.

d) S.P. = $(1 + \frac{d}{100})$ + M.P.

iii) A square possesses a rotational symmetry of order …… about the point of intersection of its diagonals.

a) 2

b) 3

c) 4

d) 5

iv) $3^4 \div 3^4$ =?

a) 0

b) 1

c) 2

d) 4

v) In a trapezium number of pair/pairs of parallel lines is/are:

a) 2

b) 1

c) 3

d) 0

vi) In which of the following solids. all the lateral faces are not triangular ?

a) Triangular prism

b) Triangular pyramid

c) square pyramid

d) Pentagonal pyramid.

vi) The value of $(256)^{\frac{5}{4}}$ is:

a) 512

b) 984

c) 1024

d 1032

vi) Arranging the numerical figures of a data in ascending or descending order is called:

a) frequency

b) mean

c) array

d) tally marks

ix) The part of the circular region bounded by an are and radii is called:

a) sector

b) segment

c) diameter

d) tangent

x) What percent of 80 is 92 ?

a) 115

b) 151

c) 150

d) 511

Question: 2 Fill in the blanks.

i) If x% of 35 is 42. then x = …….

ii) C.P. = ……. x S.P. (with respect to profit)

iii) A Chord of a circle divides the circular region into two parts each called a……

iv) Class - size of the class interval 15 - 25 is……..

v) Probability of occurrence of an event E. denoted by P(E) is defined by P(E) = ……

Question: 3 Write True (T) or False (F).

i) Every circle has a unique diameter.

ii) Euler's formula is given by F - E + V = 4.

iii) Every rhombus is a square.

iv) If a pair of opposite sides of quadrilateral are equal and parallel, then it is a parallelogram.

v) $(x + 2)(x + 5) = x^2 + 7x - 10$.

Question: 4 Who Am I?

i) I am having three lines of symmetry .

ii) I am the line which touches a circle at one and one point only

iii) I am the number of times a particular observation occurs in a given data.

iv) I am the total number of outcomes on rolling a die.

v) I am the sum of all the angles of a quadrilateral.

Question:5

i) Verify Euler's formula for cuboid.

ii) Construct a triangle ABC such that AB = 3.5 cm and angle A= angle B = 65° Draw the lines of symmetry for this triangle

iii) Complete the following table.

Class-interval	Class-limits		Class-size	Class – Size	Class-boundries	
	Lower	Upper			Lower	Upper
21 - 25						
26 - 30						
31 - 35						
36 - 37						
41 - 45						

SECTION B (40 Marks)

Attempt any five questions from this Section**)**

Question: 1

a) Find the following product:-

i) (3x + 5) (3x + 5)

ii) (b - 13) (b + 13)

b) Expand:

i) $(5\,x + 4\,y)^2$

ii) $(988)^2$

Question: 2

a) Evaluate:- $(64)^{\frac{2}{3}} + \sqrt[3]{125} + 3^{\circ} + \frac{1}{2^{-5}} + (27)^{\frac{-2}{3}} \times (\frac{25}{9})^{\frac{-1}{2}}$

b) Evaluate:- $\frac{1}{1+x^{a-b}} + \frac{1}{1+x^{b-a}}$

Question 3

a) Find a single discount equivalent to two successive discounts of 20% and 10%.

b) Find the selling price when: C.P. = Rs. 7640 and Gain = 15%

Question: 4

a) The angles of a quadrilateral are in the ratio 2: 3: 7: 6. Find the measure of each angle of the quadrilateral.

b) Two angles of aquadrilateral are 116° and 849° and remaining two angles are equal. What is the measure of each of the equal angles?

Question 5

a) A die is thrown at random. Find the probability of getting.

i) 2,

ii) a number less than 3,

iii) a composite number,

iv) a number not less than 3

b) The weekly pocket expenses(in rupees) 30 students of a class are given below:

62, 80, 110, 75, 84, 73, 60, 62 100, 87, 78, 94, 117, 86, 65, 68, 90, 80, 118, 72, 95, 72, 103, 96, 64, 94, 87, 85, 105, 115.

Construct a frequency table with class intervals 60 - 70, 70 - 80.

Question: 6

a) Find the following products: i) $(2x + 3y)(5x + 4y)$ (ii) $(3x - 5y)(x + 2y)$

b) Find the following product using identity:-

i) $(ab + 5)(ab - 5)$

ii) $(4x^2 + 5y^2)(4x^2 - 5y^2)$

Question: 7

a) ABCD is a parallelogram in which AB = 8.5 cm and its perimeter is 24 cm. Find the length of each of its remaining sides.

b) In a quadrilateral ABCD ,it is being given that AB || DC. ∠A: ∠D = 2: 3 and ∠B : ∠C = 4 : 5. Find the measure of each angle of quadrilateral ABCD.

Question: 8

a) What number when increased by 15% becomes 276 ?

b) In an examination. Suman scored 60 out of 75 in science. 84 out of 100 in mathematics. 36 out of 50 in Hindi and 30 out of 45 in English.

i) In which subject her performance is worst?

ii) In which subject her performance is the best?

iii) What is her aggregate percentage of marks?