SUMMATIVE ASSESSMENT – SECOND TERM

MATHEMATICS

Std - VIII

Max. Marks: 100

Time: 2½ Hrs

Name of the School:	**Name of the Student:**
_____	_____
Place:	**Roll No.:**
_____	_____

I. Choose the correct answer: **10 x 1 = 10**

1. $\frac{12}{100} \times 850 =$ _____
   a) 202 b) 102 c) 302 d) 402
2. What percentage of 30 is 12?
   a) 4% b) 400% c) 40% d) 0.4
3. When the selling price is lesser than the cost price, a _____ is incurred.
   a) Profit b) Loss c) Discount d) Overhead
4. Discount = _____
   a) MP – SP b) SP – MP c) MP × SP d) $\frac{MP}{SP}$
5. A completed work in 12 hours. The fraction of the work that he will complete in 2 hours is _____.
   a) $\frac{1}{12}$ b) $\frac{1}{2}$ c) $\frac{1}{4}$ d) $\frac{1}{6}$
6. The sum of the angles of a triangle is _____.
   a) 90° b) 180° c) 270° d) 360°
7. The measures of two angles of a triangle are 37° and 64°. Find the measurement of the third angle.
   a) 69° b) 79° c) 89° d) 99°
8. _____ is the study of techniques used for encryption and decryption of data in a secure form.
   a) Biography b) Cryptography c) Calligraphy d) Geography
9. _____ cipher is also called zigzag cipher.
   a) Rail fence b) AT Bash c) Caesar d) Polybius square
10. A triangle is right angled, if the sides are in the ratio _____.
    a) 3:4:5 b) 4:5:6 c) 3:5:6 d) 4:6:7

II. Match the following: **5 x 1 = 5**

1. AA similarity – $\frac{L}{CP} \times 100\%$
2. Loss % – Two angles are equal
3. Profit % – MP – SP
4. Discount – $\frac{P}{CP} \times 100\%$
5. SI – $\frac{Pnr}{100}$

III. Fill in the blanks: **5 x 1 = 5**

1. Speed = _____.
2. *x* km/hr = _____ m/s
3. Complete the Pythagorean triplet (8, 15, _____)
4. Lines that do not intersect or touch each other at any paint are called _____ lines.
5. Three or more lines that pass through the same point are called _____ lines.

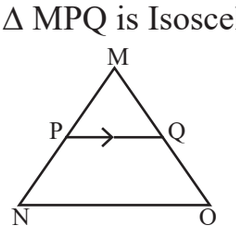
IV. Do as Directed: **10 x 3 = 30**

1. a) The three medians of the triangle intersect at the _____.
   b) _____ is Equidistant from the three vertices of a triangle
   c) The three perpendicular bisectors of a triangle intersect at the _____.
2. Define centroid with a diagram.
3. Verify whether (7, 24, 25) is a Pythagorean triplet or not?
4. Given 3 digits : 1, 3, 5. How many 3 digit numbers can be formed?
5. Write the pascals triangle up to row 10.
6. Write your name and your school name using the AT Bash cipher method. The shift key is 3.
7. 24% of the students of a class were absent on a Rainy day. If the number of students who were absent was 6, What is the strength of the class.

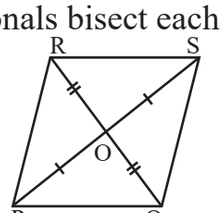
   8. 45% of 50 = _____
   12% of 78 = _____
   15% of 400 = _____
9. A camera was sold for ₹ 30000 incurring a loss of 15%. Find the cost price of the camera.
10. Find the SI. P = 10000, *n* = 3 years, *r* = 5%

V. Answer the following: **10 x 5 = 50**

1. At what rate percentage will ₹ 5625 amounts to ₹ 6084 in 2 years at compound interest.
2. If 12 men can finish a work in 66 days, how long will 24 men will finish the work.
3. A train 250 m long crosses a tunnel 450m long. If the speed of the train is 72 km/h. Find the time taken to cross the tunnel.
4. In Δ MNO, ($\overline{PQ}$) is II to ($\overline{NO}$). Δ MPQ is Isosceles.



   Prove that Δ MNO is also isosceles.
5. PQRS is a Rhombus. The diagonals bisect each other, Prove that ∠POQ = 90°



6. Encrypt the plain text 'INDEPENDENCE DAY' to cipher text using Polybius square method.
7. Write the techniques of Encryption, used in cryptology.
8. A mobile phone was sold for ₹ 17500 after a discount of 20%. What is the market price of the phone?
9. Construct a Golden spiral using your ruler and compass.
10. The population of a region increases by 5% each year for 3 years, If the initial population was 120000. What is the population after 3 years?
11. a) Calculate the angles of a triangle if they are in the ratio 1:2:3

    (or)

    b) P, Q, R are the Measures of exterior angles of Δ PQR, Find P + Q + R.