SUMMATIVE ASSESSMENT - SECOND TERM

MATHEMATICS

Max. Marks: 100

Std - VIII

Time: 2:30 Hrs

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

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

1. 20% of 40 is _____
   a) 80 b) 8 c) 0.8 d) 0.08
2. The co-efficient of y in $-5xyz$ is _____
   a) $-5xz$ b) 5 c) $5xz$ d) -5
3. The difference between the C.I and S.I for 3 years is _____
   a) $P\left(\frac{r}{100}\right)^2$ b) $P\left(\frac{r}{100}\right)^2\left(3+\frac{r}{100}\right)$ c) $P\left(\frac{r}{100}\right)^2\left(3-\frac{r}{100}\right)$ d) $P\left(1+\frac{r}{100}\right)^3$
4. If $2(x-2) = -\frac{18}{5}$, then the value of x is _____
   a) 00.5 b) -5 c) $-\frac{1}{5}$ d) 1/5
5. If the sum of a number and its half is 30 then the number is _____
   a) 15 b) 20 c) 25 d) 40
6. The equation $x^2 + y = 4$ is a _____ function.
   a) linear b) cubic c) quadratic d) constant
7. 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
8. What is the eleventh Fibonacci number? _____
   a) 55 b) 77 c) 89 d) 144
9. A fruit vendor sells fruits for ₹ 200 gaining ₹ 40. His gain percentage is _____
   a) 20% b) 22% c) 25% d) $16\frac{2}{3}\%$
10. The compound interest on ₹ 5000 at 10% p.a. for 2 years is _____
    a) ₹ 1050 b) ₹ 2050 c) ₹ 1210 c) ₹ 6050

II. Fill in the blanks: **10 x 1 = 10**

11. If an article is sold for ₹ 125 and there is a profit of 25, then the cost price is _____
12. A part of the circumference of a circle is called the _____
13. $y = 0$ is the equation of the _____ axis.
14. The method of solving a linear equation by collecting the terms with variables on one side and the numbers on the other side is called the _____ method.
15. Complete the Pythagorean triplet: (8, 15, _____)
16. The amount, if the compound interest is calculated quarterly, is found using the formula _____
17. If the cost price is greater than the selling price, there is a _____
18. The marked price of a mixer grinder is ₹ 4500. It is sold for ₹ 4140 after discount. The rate of discount is _____
19. Twice a number increased by 4 can be expressed as _____
20. 15% of 25% of 10000 = _____

III. Say True or False: **5 x 1 = 5**

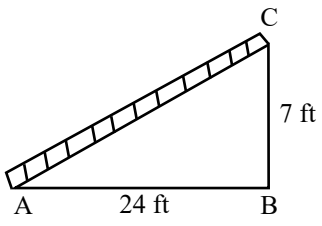
21. A line segment that joins any two points on a circle is the diameter.
22. Linear equation in one variable has only one variable with power 2.
23. In a parallelogram, the opposite sides are equal.
24. In a right angled triangle, the hypotenuse is the greatest side.
25. In the IV quadrant both the abscissa and the ordinate are negative.

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

26. $5x\,(4xy - 4)$ - C.P (1 – loss%)
27. $\frac{4}{11} - x = \frac{-7}{11}$ - $\frac{\text{D}}{\text{M.P}} \times 100$
28. S.P - $\text{P}\left(1+\frac{\text{r}}{200}\right)^{2n}$
29. Amount - $20x^2y - 20x$
30. Discount % - $x = 1$

V. Do as directed: [Any 10] **10 x 2 = 20**

31. Factorise using identities: a) $4p^2 - 16q^2$ b) $x^2 - 8x + 16$
32. Find the area of a sector whose perimeter is 64 cm and length of the arc is 44 cm.
33. Simplify: $(9y^2 + 6y - 1) \div (3y + 1)$
34. Find $33\frac{1}{3}$ % of 84.
35. A number is increased by 25% and then decreased by 20%. Find the change in that number.
36. If the C.P of a wall hanging is ₹ 650 and the S.P is ₹ 780, then find the profit/loss percentage.
37. The marked price on a pair of jeans is ₹1200 and it is sold at a discounted price of ₹ 900. What is the amount of discount? What is the percentage of discount?
38. Calculate the amount and compound interest on ₹ 36000 for 2 years at 5% p.a compounded annually.
39. Solve: $y + \frac{1}{6} - 3y = \frac{2}{3}$
40. The sum of three consecutive odd numbers is 75. Find the number that is the largest among them.
41. A ramp is constructed in a hospital as shown. Find the length of the ramp.

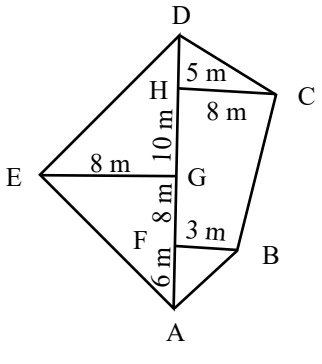


42. A message like “Good morning” written in reverse would read as “Doog Grinrom”. In the same way decode the sentence given below:

“scitamehtam si eht neeuq fo ecneics”

VI. Answer any six of the following questions: **8 x 5 = 40**

43. Find the area of the irregular polygon shaped field given below:



44. Nanda's marks in 3 math tests T1, T2 and T3 were 38 out of 40, 27 out of 30 and 48 out of 50. In which test did he do well? Find his overall percentage in all the 3 tests.

45. A fruit seller bought 20 kg of grapes for ₹1500. He sold 12.5 kg at ₹ 80 per kg and 5 kg at ₹ 60 per kg. He had to discard the balance because they were spoiled. What was his overall profit/loss and profit/loss percentage?

46. Samir purchased vegetables for ₹ 350 and other items for ₹ 700 at a shop. If there is no GST on sale of vegetables, and the GST on other items is 12%, what is the amount he has to pay?

47. At what time will a sum of ₹ 3000 will amount to ₹ 3993 at 10% p.a compounded annually?

48. A number consists of two digits whose sum is 9. If 27 is substracted from the original number, its digits are interchanged. Find the original number.

49. A total of 90 currency notes, consisting only of ₹ 5 and ₹ 10 denominations, amount to ₹ 500. Find the number of notes in each denomination.

50. Mayan travelled 28 km due north and then 21 km due east. What is the least distance that he could have travelled from his starting point?

VII. Answer the following: **2 x 5 = 10**

51. a) Construct the quadrilateral, given that AB = 5.4 cm, BC = 3.7 cm, CD = 4.3 cm, AD = 5.1 cm and AC = 6.3 cm

(***Or***)

b) Construct a trapezium LMNO, given LM || ON, LM = 6 cm, MN = 4 cm, NO = 3.5 cm and $\angle M = 70°$. Draw the altitude and find out the area.

52. a) Sketch the graph of the following function: $y = x - 4$

(***Or***)

b) An over-head tank is full with water. Water leaks out from it at a constant rate of 10 litres per hour. Draw a 'time-wastage' graph for this situation and find:

i) The amount of water wasted in 150 minutes

ii) The time at which 75 litres of water is wasted