Genius High School (2020-2021)

Summative assessment

Class – VIII

Mathematics

Maximum marks : 50

Time allowed: 2 hours

General instructions:

i. All the questions are compulsory.
ii. The question paper consists of 17 questions divided into 3 sections A,B,and C.
iii. Section A comprises of 6 questions of 2 marks each. Section B comprises of 6 questions of 3 marks each. Section C comprises of 5 questions of 4 marks each.
iv. There is no overall choice. However, an internal choice has been provided in two questions of 3 marks each and two questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
v. Use of calculators is not permitted.

SECTION A (6x2=12)

1. Find two rational numbers between $-\frac{3}{2}$ and $\frac{5}{3}$
2. Find the cube root of 10648 by prime factorization method.
3. A man got a 10% increase in his salary. If his new salary is Rs. 1,54,000 , find his original salary.
4. Solve : $\frac{2y+4}{2-6y} = \frac{-2}{5}$.
5. Express : (i) 0.00000000837 in standard form.
   (ii) 3.61492×10^6 in usual form.
6. If the three digit number 24x is divisible by 9, what is the value of x ?

SECTION B (6x 3 = 18)

7. Simplify : $\frac{3^{-5} \, x \, 10^{-7} x \, 125}{15^{-5} \, x \, 6^{-7}}$.
8. On the eve of Gandhi Jayanthi, a saree is sold for Rs. 720 after allowing 20% discount. What is its marked price?
9. Find the values of the letters A,B and C .

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   4  A
 + 9  8
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   C  B  3
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10. Find the smallest square number that is divisible by each of the numbers 6,9,15 and 20 .
11. Find the product : (i) (2x+5) (4x-3) (ii) $(t+s^2)(t^2+s)$

(OR)

Find: (a) Add : 2x(z-x-y) and 2y(z-y-x)

(b) subtract : 3l(l-4m+5n) from 4l(10n – 3m + 2l).

12. solve: $\frac{2}{3}(x-5) - \frac{1}{4}(x-2) = \frac{9}{2}$.

(OR)

The denominator of a rational number is greater than its numerator by 6. If the numerator is decreased by 1 and denominator is increased by 1, the number obtained is $\frac{1}{3}$. Find the number.

SECTION C (5 x 4= 20)

13 . simplify by using suitable property:

$\frac{8}{14} \times \frac{3}{4} \times \left(\frac{-49}{15}\right) + \frac{8}{5} \times \frac{15}{7}$

14. The age of Anuj is one third of the age of Babitha. After 15 years , the age of Anuj will be half of the age of Babitha. Find their present ages.

15. Is 2352 a perfect square ? if not , find the smallest number by which we multiply 2352 to make it a perfect square. Also find the square root of new number.

16.kiran borrows Rs. 56000 at 10% per annum compounded half yearly. What amount would she have to pay after $1\frac{1}{2}$ year.

OR

A mixture of milk and water is in the ratio 3:2 . Find the percentage of milk in the mixture.

17. using suitable identities , evaluate : (i) (2y+5)(2y+5) (ii) $153^2 - 147^2$

OR

If 3x + 5y = 11 and xy = 2, find the value of $9x^2 + 25y^2$.