CLASS IX Holidays Homework (MATHS)

1 Make a model of √6.5

2 Make a model for identity $(a + b)^2 = a^2 + b^2 + 2ab$

3 Make a collection of achievements of 5 Mathematicians in the field of Mathematic

4 Do the assignment attached alongwith

ASSIGNMENT

1.Express23.41919…… in the form p/q where p and q are integers and q≠0.

2. Rationalise the denominator $\frac{\sqrt{3}-\sqrt{4}}{\sqrt{3}+\sqrt{4}-\sqrt{7}}$

3. Simplify : $3\sqrt{45} - \sqrt{125} + \sqrt{200} - \sqrt{50}$

4. Prove that : $\frac{2^{30}+2^{29}+2^{28}}{2^{31}+2^{30}-2^{29}} = \frac{7}{10}$

5.If $x = (2+\sqrt{5})^{1/2} + (2-\sqrt{5})^{1/2}$ and $y = (2+\sqrt{5})^{1/2} - (2-\sqrt{5})^{1/2}$ then evaluate x^2+y^2

6. If a=3 and b= 2 then find $(a^b + b^a)^{-1}$

7. If $a = 3 - 2\sqrt{2}$. Find the value of $\sqrt{a} + \frac{1}{\sqrt{a}}$

8. Express $1.13\overline{2} + 0.\overline{35}$ as a fraction in simplest form.

9. If 2x+y+z =0 show that $8x^3 + y^3 + z^3 = 6xyz$

10. If $a^2 + b^2 + c^2 = 30$ and a + b+ c =10 then find the value of ab + bc + ca

11. (a)If the polynomial $2x^3-9x^2+15x+p$ when divided by x – 2 leaves (-p) as remainder .Find the value of p

11. (b)Draw the graph of the equation 2x-3y=6. Find the points where the graph cuts the coordinate axis.

12. Draw the graph of the lines -2x+5y=15 and -x+y=7 on the same graph and shade the triangle formed by these lines and the X axis.

13. Factorise the polynomial $125(x-y)^3 + (5y-3z)^3 + (3z-5x)^3$

14. If 3x=a+b+c then find the value of $(x-a)^3 + (y-b)^3 + (z-c)^3$

15. Factorise (1) x^6-y^6 (2) x^4-y^4