IXth – MATHEMATICS.
HOLIDAY HOMEWORK.

* Practice the study material provided to you.
* Practice the following assignment in class work Register.

Q1. Write a rational no. between $\frac{1}{9}$ and $\frac{2}{9}$.

Q2. Write a rational no. which <u>does not</u> lie between $\frac{-2}{3}$ and $\frac{-1}{5}$

Q3. Express $3.\overline{2}$ in the form of $\frac{p}{q}$ $[p, q \rightarrow$ integers, $q \neq 0]$

Q4. State true or false :-
(i) Every whole no. is natural no.
(ii) Every rational no. is an integer.

Q5. Simplify :- $\sqrt{125} \times \sqrt{5}$.

Q6. Simplify :- $\frac{6 - 4\sqrt{3}}{6 + 4\sqrt{3}}$ by rationalising the denominator.

Q7. Find :- $\sqrt{(3^{-2})}$

Q8. Find :- $[(16)^{\frac{1}{2}}]^{\frac{1}{2}}$.

Q9. Find :- $\left(\frac{64}{25}\right)^{\frac{-3}{2}}$.

Q10. Write coefficient of x^3 in the following –
(i) $5x^3 - 6x^2 + 7x - 9$
(ii) $\frac{2}{5}x^3 - x$.

Q11. Give two examples of binomial of degree 5.

Q12. Find the value of the polynomial $y^2 - 5y + 6$ at
(i) $y = 0$ (ii) $y = -1$.

Q13. verify whether the following are zeroes of the polynomial
$p(x) = x^3 - 3x^2 + 4x - 12$.
$x = 4$.

Q14. What is the value of the polynomial $x^2 + 8x + k$, if $k = -1$ is a zero of the polynomial.

Q15. If $f(x) = 5x^2 - 4x + 5$, find $f(1) + f(-1) + f(0)$

Q16. Find the remainder when $4x^3 - 3x^2 + 4x - 2$ is divided by
(i) $x - 1$ (ii) $x - 2$.

Q17. Find the following product using suitable identity —

(i) $(2x+5)(2x-5)$

(ii) $(4+5x)(4+5x)$

Q18. Evaluate the following products by using suitable identities —

(i) 104×105.

(ii) 102×98.

Q19. Factorise using suitable identities —

(i) $x^2 - y^2 + 2x + 1$.

Q20. Factorise → $a^4 - 16b^4$.