

HOLIDAY HOMEWORK X MATHS

1. If α and β are the zeroes of $x^2 + 7x + 12$, then find the value of $1/\alpha + 1/\beta + 2\alpha\beta$.
2. Find a quadratic polynomial whose zeroes are 2 and -6. Verify the relation between the coefficient and the zeroes of the polynomial.
3. If α and β are zeroes of the quadratic polynomial $x^2 - 6x + a$, find the value of a if $3\alpha + 2\beta = 20$.
4. Obtain all zeroes of $f(x) = x^4 - 3x^3 - x^2 + 9x - 6$ if two of the zeroes are $-\sqrt{3}$ and $\sqrt{3}$.
5. If one solution of the equation $3x^2 - 8x + 2k + 1$ is 7 times the other find the solutions and the value of k .
6. On the occasion of Diwali Reshmi wants to donate blankets to poor people. She purchased two blankets more than the number of poor ones. If cost of each blanket is rupees 2 less than the number of poor ones. Found the amount she paid for blankets and what value is reflected from the questions.
7. Aayush went to school by cycle at the speed of x kmph and covered the distance in $x-2$ hrs. His brother Anuj goes on foot with the speed of $x-2$ kmph and takes x hrs. to reach school. Represent the distance covered by both of them in the form of polynomials. Express their values to reach to school.
8. Product of timings of 3 major activities for one student out of 24 hours is $x^3 + 12x^2 + 44x + 48$ and product of two of its activities is $x^2 + 6x + 8$. If quotient of these 2 is the time of study, find the number of hours for a student's study. What values that reflect, if these time is given to activity playing?