

ASSIGNMENT QUESTIONS (TO BE DONE IN THE CLASS WORK REGISTER)

1. Find the prime factors of the following numbers :
(i) 156 (ii) 336 (iii) 234 (iv) 556920
2. Find the H.C.F and L.C.M by prime factorization method :
(i) 90 , 144 (ii) 144 , 180, 192 (iii) 40 , 36 , 126 (iv) 336 , 54 .
3. The L.C.M and H.C.F of two numbers are 180 and 6 respectively. If one of the numbers is 30 , find the other number .
4. Prove that $\sqrt{5}$ is an irrational number.
5. Prove that $5 - 2\sqrt{3}$ is an irrational number.
6. If the sum of L.C.M and H.C.F of two numbers is 1260 and their L.C.M is 900 more than their H.C.F , then Find the Product of two numbers.
7. Find the Zeros of the following questions and Verify the relationship between the zeros and their coefficients.
(i) $P(x) = x^2 - 2x - 8$ (ii) $f(x) = 4x^2 - 4x + 1$ (iii) $P(x) = x^2 + 2\sqrt{2}x - 6$
8. If α and β are the zeros of the quadratic polynomial $p(x) = x^2 - x - 4$, find the value of :
(i) $\frac{1}{\alpha} + \frac{1}{\beta} - \alpha\beta$. (ii) $\alpha^2\beta + \alpha\beta^2$.
9. If one zero of the quadratic polynomial $2x^2 - 3x + p$ is 3 , find the other zero . Also find the value of p .
10. If α and β are the two zeroes of the quadratic polynomial $21x^2 - x - 2$, find a quadratic polynomial whose zeroes are 2α and 2β .
11. Check graphically whether the pair of linear equations : $4x - y - 8 = 0$ and $2x - 3y + 6 = 0$ is consistent . Also , find the vertices of the triangle formed by these lines with x - axis .
12. Draw the graph of the following equations : $x + 3y = 6$ and $2x - 3y = 12$. Also find the area of the triangle formed by these lines and y - axis .
13. Find the value of k for which the pair of linear equations has unique solutions :
(i) $x + 2y = 5$ and $3x + ky + 15 = 0$
(ii) $kx + 2y = 3$ and $3x + 6y = 10$
14. Find the value of p for which the system of equations has infinitely solutions :
(i) $px + 3y + (3 - p) = 0$ and $12x + py - p = 0$
(ii) $(p - 3)x + 3y = p$ and $px + py = 12$
15. For what value of a and b , the pair of linear equations have infinitely solutions :
 $x + 2y = 1$ and $(a - b)x + (a + b)y = a + b - 2$.
16. Solve for x and y :
(i) $3x - 5y = 4$ & $2y + 7 = 9x$
(ii) $2x + y = 5$ & $3x + 2y = 8$.
(iii) $ax + by = a - b$ & $bx - ay = a + b$
(iv) $37x + 43y = 123$ & $43x + 37y = 117$
17. The sum of the numerator and the denominator of a fraction is 8 . If 3 is added to both the numerator and the denominator, the fraction becomes $\frac{3}{4}$. Find the fraction.
18. In a competitive examination, one mark is awarded for each correct answer while one - half mark is deducted for each wrong answer. Jyoti answered 120 questions and got 90 marks. How many questions did she answer correctly?
19. Seven times a two digit number is equal to four times the number obtained by reversing the order of its digits. If the difference of the digits is 3. Determine the number.
20. A father's age is three times the sum of the ages of his two children. After 5 years his age will be two times the sum of their ages. Find the present age of the father.