

PERIODIC ASSESMENT JULY 2017-18
 MATHEMATICS / Class - X

48-50
 50
 MM 50

- Q1 If $P-3, P+3, 3P+1$ are in an arithmetic progression, find $P+4$ 1
- Q2 If sum of zeroes of the polynomial $2x^2-3kx^2+4x-5$ is 6, find the value of k . 1
- Q3 If $\frac{1}{2}$ is one of the roots of the equation $4x^2-8kx+k=0$ find the value of k . 1
- Q4 if one zero of the polynomial $3x^2-5x-(2k+1)$ is reciprocal of the other, find the value of k . 1
- Q5 State the nature of roots of the quadratic equation $(2x-3)(2x+1)=x(x+1)$ 1
- Q6 Form a quadratic polynomial whose zeroes are $\frac{\sqrt{5}-2}{2}$ and $\frac{\sqrt{5}+2}{2}$ 2
- Q7 The sum of first n -terms of an AP is 60. If its first term is 25 and n^{th} term is -17 , find n . 2
- Q8 Find the roots of the quadratic equation $\sqrt{2}x^2+7x+5\sqrt{2}=0$ by using quadratic formula. 2
- Q9 Find zeroes of the polynomial $\sqrt{2}x^2-25$ 2
- Q10 Solve for x and y : 2
- $$\frac{4}{10}x+3y=\frac{12}{10}, \quad 7x-2y=\frac{17}{6}$$
- Q11 For what value of k will the following pair of linear equations $3x+y=1, (2k-1)x+(k-1)y=2k+1$ have no solution 3
- Q12 Which term of the AP $19, 18\frac{1}{5}, 17\frac{2}{5}, \dots$ is the first negative term? Also find the term. 3
- Q13 Find all other zeroes of polynomial $x^3+11x^2+23x-35$, is two of its zeroes are 1 and -5 . 3
- Q14 Solve for x and y : 3
- $$\frac{5}{x-1} + \frac{1}{y-2} = 2, \quad \frac{6}{x-1} - \frac{3}{y-2} = 1$$
- Q15 The ninth term of an AP is equal to seven times the second term and twelfth term exceeds five times the third term by 2. Find the first term and the common difference. 3
- Q16 Solve graphically the pair of equations $x+3y=6, 2x-3y=12$. Find the area of a triangle formed between the lines and y -axis. 4
- Q17 If the polynomial $x^4-6x^3+16x^2-25x+10$ is divided by x^2-2x+k , the remainder is $x+a$, find k and a . 4
- Q18 The denominator of a fraction is 2 more than its numerator. If the sum of the fraction and its reciprocal is $\frac{34}{15}$, find the fraction. 4
- Q19 A boat goes 30km upstream and 44km downstream in 10 hours. In 13 hours, it can go 40km upstream and 55km downstream. Find the speed of stream and of boat in still water. 4
- Q20 How many terms of the AP $6, \frac{11}{2}, 5, \dots$ are required to obtain the sum 25? Explain the double answer for n . 4