CHOITHRAM SCHOOL, MANIKBAGH, INDORE

Class : X **Subject : Mathematics** **Assignment no. 4**
Date of Assignment: 03/02/2017 **Date of Submission: 08/02/2017**

Q.No.	Questions	Weightage	**Level**
Q.1	If the sum and the product of the roots of the equation $kx^2 + 6x + 4k = 0$ are equal, then k = (A) $-\frac{3}{2}$ (B) $\frac{3}{2}$ (C) $\frac{2}{3}$ (D) $-\frac{2}{3}$	1 Mark	Know-ledge
Q.2	If the area of the triangle formed by the points (x,2x),(-2,6) and (3,1) is 5 square units ,then x= (A) $\frac{2}{3}$ (B) $\frac{3}{5}$ (C) $\frac{3}{11}$ (D) $\frac{3}{2}$	1 Mark	Under-standing
Q.3	If 18,a,b,-3 are in AP then a + b = (A) 19 (B) 7 (C) 11 (D) 15	1 Mark	H.O.T.
Q.4	Find the roots of the following quadratic equation (if they exist) by the method of completing the square: $3x^2 + 11x + 10 = 0$	2 Mark	Know-ledge
Q.5	If the points P (-3, 9), Q (a, b) and R (4,-5) are collinear and a + b=1, find the values of a and b.	2 Mark	Under-standing
Q.6	Find the sum of all two digits natural numbers which when divided by 3 yields 1 as remainder.	2 Mark	logic
Q.7	Prove that the equation $x(a^2+b^2)+2x(ac + bd)+(c^2+d^2)=0$ has no real roots, if $ad \neq bc$	2 Mark	H.O.T.
Q.8	Solve by factorization method: $\frac{4}{x}-3=\frac{5}{2x+3}\ x \neq 0, \frac{-3}{2}$	3 Mark	Under-standing
Q.9	A person donates money to a trust working for education of children and women in some villages. If the persons donate Rs 5000 in the first years and his donation increases by Rs 250 every year, find the amount donated by him in the eighth year and the total amount donated in eight years. **Why do you think education of women is necessary for the development of a society**?	3 Mark	Value based
Q.10	Point P divides the line segment joining the points A (-1, 3) and B (9, 8) such that AP: BP = k: 1. If P lies on the line x-y+2=0, find the value of k.	3 Mark	Multi concept
Q.11	A person on tour has Rs 360 for his expenses. If he extends his tour for 4 days, he has to cut down his daily expenses by Rs 3 .Find the original duration of the tour.	5 Mark	H.O.T.
Q.12	If the sum of m terms of an AP is the same as the sum of its n terms, show that6 the sum of its (m + n) terms is zero.	5 Mark	Logic