1.	A quadratic equation whose sum and product of roots are $-\frac{5}{6}$ and -1 respectively is: A) $6x^2 - 5x - 6 = 0$ C) $6x^2 + 5x + 6 = 0$ B) $6x^2 + 5x - 6 = 0$ D) $6x^2 - 5x + 6 = 0$
2.	Values of k for which the quadratic equation $2x^2 - kx + k = 0$ *has equal roots*: A) 0 only B) 4 C) 8 only D) 0,8
3.	If the discriminant of $3x^2 + 2x + a = 0$ is double the discriminant of $x^2 - 4x + 2 = 0$, then value of a is: A) 2 B)-2 C) -1 D) 1
4.	**Assertion:** Every quadratic equation has at most two roots. **Reason:** Every quadratic equation has at least one real root. A) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion B) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion. C) Assertion is true but the reason is false. D) Both assertion and reason are false.
5.	Find value of p such that the quadratic equation $(p - 12)x^2 - 2(p - 12)x + 2 = 0$ *has equal roots*.
6.	In the centre of a rectangular lawn of dimensions 50m X 40m, a rectangular pond has to be constructed, so that the area of grass surrounding the pond would be $1184m^2$. Find length and breadth of the pond.
7.	If roots of the equation $(a - b)x^2 + (b - c)x + (c - a) = 0$ are equal, prove that $2a = b + c$

8.	CASE STUDY:
	A flight got delayed by 40 minutes due to bad weather conditions. In order to reach his destination on time, which is 1600 km away, the aeroplane had to increase the speed by 400km/h of its original speed, which is x km/h
	Based on the above information, answer the following questions:
	    a) Find the expression for the time taken (in hours) by the plane to cover 1600 km with its increased speed?
	    b) Find the equation from which, the original speed of the plane can be calculated?
	    c) Find the original speed of the plane.
	        OR
	        If the speed of the plane is decreased due to some technical reasons, then what will be the effect on the time taken if the distance remains the same?