BCM SCHOOL, BASANT AVENUE, DUGRI ROAD, LUDHIANA
CLASS -X (MATHEMATICS)
Assignment 2 (Linear equations, Statistics, Trigonometry)

1. What should come in the blank?
Mode= (……) –2 (mean)
(a)3 (median) (b)4 (median) (c)2 (median) (d)5 (median)

2. If cos A = 4/5, then tan A = ?
(a) 3/5 (b) ¾ (c) 4/3 (d) 4/5

3. The pair of equations x = 0 and x = 5 has
(a) no solution (b) unique/one solution
(c) two solutions (d) infinitely many solutions

4. **Assertion (A):** The pair of linear equations 3x-5y+1=0 and 7x+2y-25=0 has a unique solution.
Reason(R): A pair of linear equations can be solved by elimination method.
(a) both A and R are correct and R is the correct explanation of A.
(b) both A and R are correct and R is not the correct explanation of A.
(c) A is true and R is false.
(d) A is false and R is true.

5. The mean of the following frequency distribution is 62.8 and the sum of all frequencies is 50. Compute the missing frequencies f_1 and f_2.

Class	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100	100 - 120	Total
Frequency	5	f_1	10	f_2	7	8	50

6. Prove that: $a^2 + b^2 = x^2 + y^2$ when $a \cos \theta - b \sin \theta = x$ and $a \sin \theta + b \cos \theta = y$.

7. Four years ago, a father was six times as old as his son. Ten years later, the father will be two and a half times as old as his son. Determine the present age of father and his son.

8. **CASE STUDY:** Pro kabaddi league , is a professional level Kabaddi league, launched in 2014 in India. One successful defence is worth 1 point and one successful raid is worth 2 Points. In a match, Dabang Delhi team has 30 successful defences and raids and the number of raids was 10 more than the number of defences.
Based on above information, answer the following questions:
(a) If x and y are the numbers of successful defences and raids respectively, then find equations which represent the problem.
(b) How many points were scored by raiders?
(c) How many points were scored by defenders?
(d) What was the total number of Points scored by Dabang Delhi in the match?