**Solve each question using an algebraic equation. Make sure you have a let statement, proper solution with a variable and therefore statement.**

1) Justin is six years older than his sister, and the sum of their ages is 32. Determine Justin’s age algebraically.

2) Cameo is 5 years older than Isabella. In 6 years, the sum of their ages will be 35 years. How old is each person now?

3) Sarah is twice as old as Jake. Five years ago, the sum of their ages was 26. How old is each person now?

4) There are 15 fewer quarters than dimes in a parking meter. The value of the coins is $15.50. How many dimes are there?

5) A coin-sorting machine contains nickels, dimes and quarters worth $5.50. There are 3 times as many nickels as dimes, and 2 more quarters than dimes. How many of each type of coin are there?

6) A cash register contains 53 coins worth $4.40. They are all nickels and dimes. How many of each kind are there?

7) One number is four times a second number. If the sum of the two numbers is thirty, find the numbers.

8) The difference between two numbers is 16. Five times the smaller is the same as 8 less than twice the larger. Find the numbers.

9) The sum of two numbers is the same as four times the smaller number. If twice the larger is decreased by the smaller, the result is 30. Find the numbers.

10) A plane left Montreal for Calgary, a distance of 3000km, travelling at 800km/h. At the same time, a plane left Calgary for Montreal travelling at 700km/h. How long after take off did the planes pass each other?

11) Two cars left a service centre at the same time. One car travelled in one direction at 75km/h. The other car travelled in the opposite direction at 85km/h. After how long were they 600km apart?

12) Walnuts sell for $6.75/kg and Cashews sell for $10.20/kg. How much of each would there be in 120kg mixture that sells for $8.75/kg?