TAKE HOME TASK – 1.

Q DIVISION.

DATE: 13 JAN 2022.

SUBMISSION DATE: 19 JAN 2022.

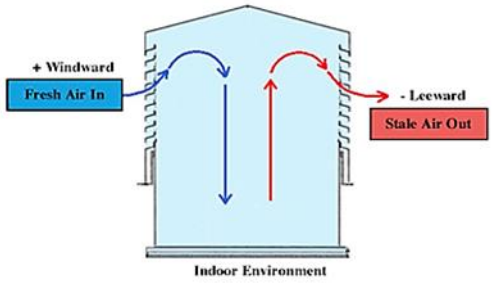
Apply Problem Solving Framework and also write algorithm for each of the below problem.

1. In a university, student performance for a course is evaluated based on weighted score, which is computed considering the marks obtained in 3 assignments and 2 exams. The assignment and exams are conducted for a maximum of 100 marks. The weightage of each assignment and each exam is 10% and 35% respectively. Compute the weighted score base.

2. An educational institute has arranged a chocolate eating competition where you have 15 Rs with you and cost of 1 chocolate is 1Rs and there is some good news for students that they can return 3 wrappers and take 1 more chocolate. Write the maximum number of chocolate you can eat.

3. A person deposits Rs:100000 into a bank account paying 4% simple interest per year. Find the amount he will get at the end of 3 years.

4. Airflow in buildings.



The pressure differences on the windward and leeward sides of a building can contribute to air flow inside the building. The rate of air change is governed by pressure differences and by the effectiveness of the exposed openings. The approximate rate of exchange, when the direction of wind is normal to the building side and the areas of the inlets and outlets are equal, can be expressed as: Q = 3150AV, where Q = rate of airflow in cubic feet/hour, A = area of inlets in square feet, V = wind velocity in miles/hour. This expression requires some adjustment in cases where the area of the outlets is different from the area of the inlets. Area of outlets vs Area of inlets is given as 1:1. Value replaced: 3150 in expression. Apply Problem Solving framework to determine Rate of airflow.