RV brewery is an emerging local brewing in Atlanta which specialises in selling customised drinks. They plan to attract customers by selling a special mix of multiple types of alcohols. They plan to launch two new drinks this summer. You recently joined them as head of planning, and you are given a task of making the best out of available material. You have 1000 fluid ounces of mixer, 200 fluid ounces of Vodka and 100 of Whiskey. You were told by the marketing team that to justify the cost of drink produced they should have predefined limits of alcohol in them. They decided to name the drinks Thunder and Viper. Thunder should contain at least 20% of Vodka and Viper must contain at least 10 of Vodka and 10% of Whiskey. Thunder sells out for **$5.40** and Viper for **$4.20.** Maximise the revenue of RV brewery by optimising the blending mix of drinks.

**Discussion.**

This is an example of a blending problem where a particular product is a mix of two or more materials. Here, there are 2 types of drinks, each made from a mixture of mixer, Vodka and Whiskey. We have the requirement that at least a certain fraction of each drink of each type must be composed of a specific material. Since we have the available ounces of each material, the decision variable must be how many ounces of each material must be allocated to produce a drink type. The sum of materials for each candy type can be assumed to be the number of units of each drink type sold. This derived number of units of drink sold can be used to find that total revenue, which must be minimized according to the objective. The constraints are clear that the total material allocated for both drink types must be within the available ounces of that material and the minimum fraction of a particular material needed in a candy type must be satisfied while allocating materials.