CSE220: Data Structures (Lab)
Fall 2024
Lab Quiz - 05
Duration: 30 Minutes

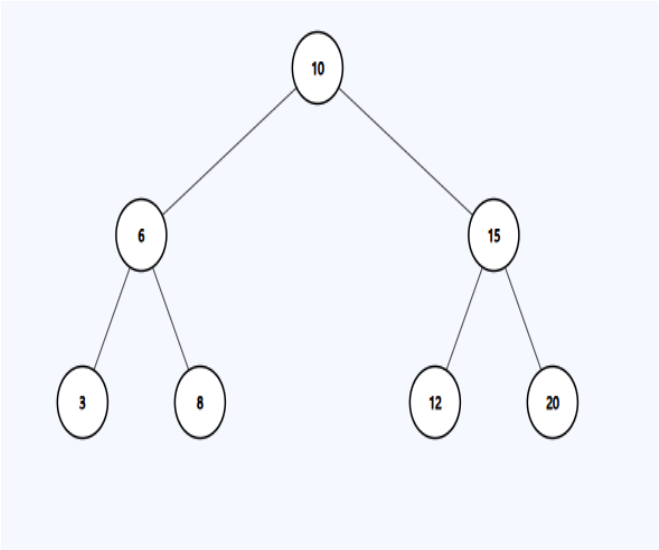
A

Name:	ID:	Section:

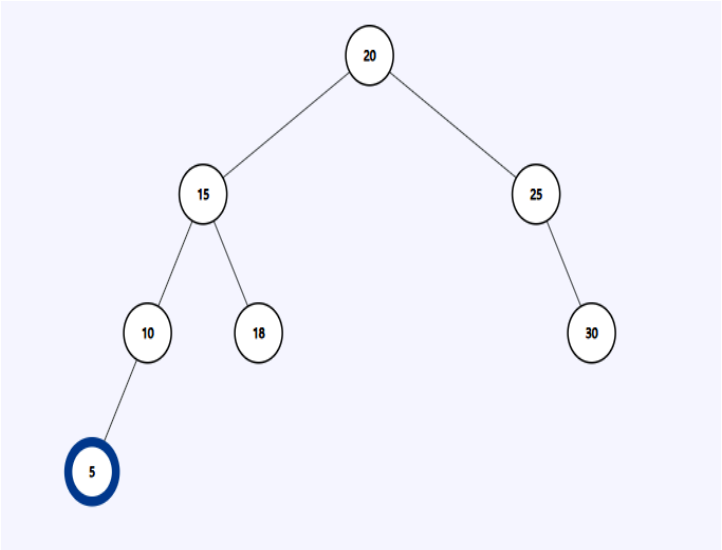
Question 1 [15 Points]

In this task you will be given the root node of a binary search tree. You need to calculate the **Product** of the values of the nodes that are **mirrors** of each other. Here, mirror means the nodes that are located in **corresponding positions in the left and right subtrees**. You need to define the **Node class** for the Binary Tree. You can use **helper functions**.

Example Tree input 1



Example Tree input 2



Sample Input	Sample Output	Explanation
mirror(root)	518400	For Tree 1 Mirror nodes are: 6 and 15, product = 6 * 15 = 90 3 and 20, product = 3 * 20 = 60 8 and 12, product = 8 * 12 = 96 Total Mirror Node product = 90*60*96 = 518400
mirror(root)	112500	For Tree 2 Mirror nodes are: 15 and 25, product = 15 * 25 = 375 10 and 30, product = 10 * 30 = 300 Total Mirror Node product = 375 * 300 = 112500