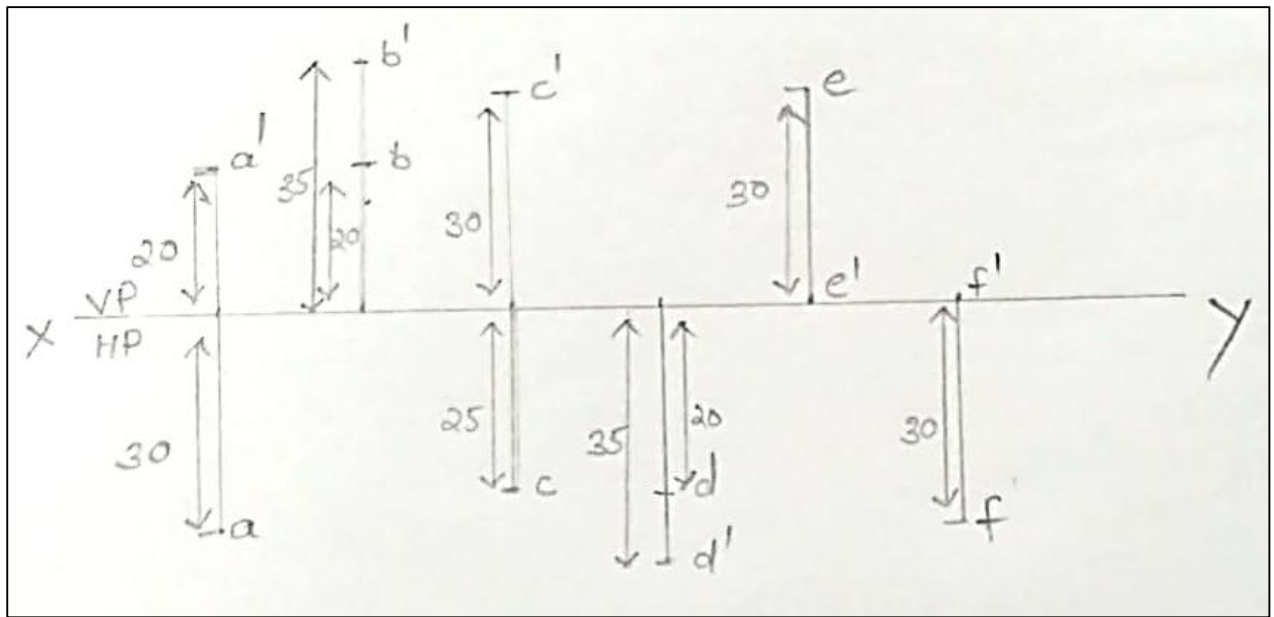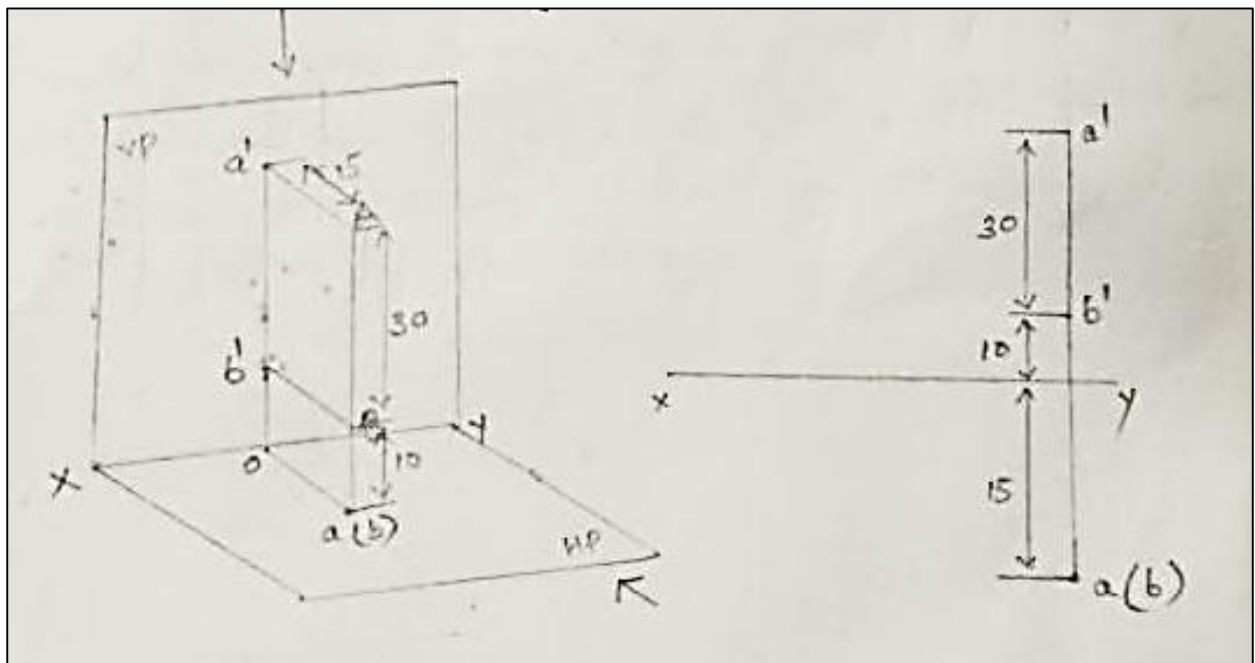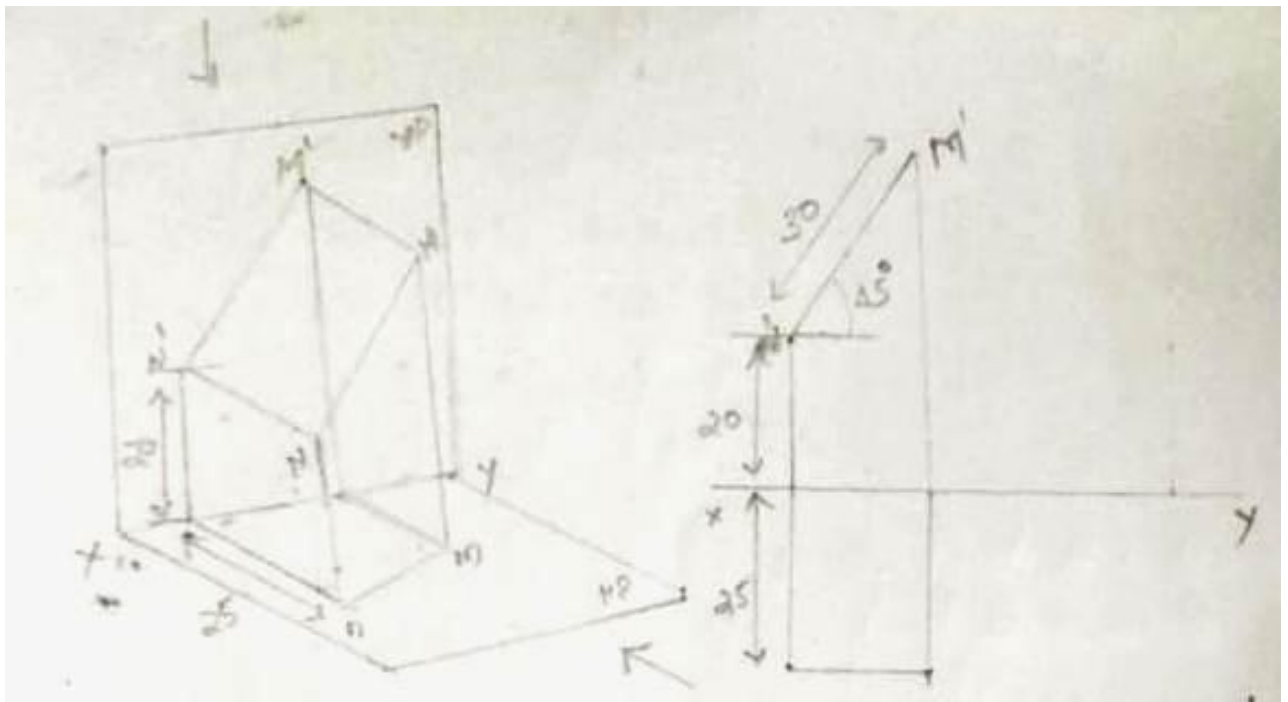Question 1: Solution

Question 2: Solution

Question 3: Solution

Question 4: Solution