simplex method.

and - is the proposed method found the optimal solution without using the simplex tableau.

From this results, we see that the proposed method has more efficient to reduce the computation when the problems have more than 10 constraints. Because this method can construct the near-optimal relaxed problem by using two constraints, and if the solution of it satisfies all constraints then we get the optimal solution.

VI. CONCLUSIONS

In this paper, we present the method for solving a 2-dimensional linear programming problem with using the slope of constraints consideration. It is another way to solve a problem without using the artificial variables. For this method, the optimal solution of the original problem can be found by two constraints from the relaxed problem. If the solution of the relaxed problem satisfies all constraints, then we get the optimal solution of original problem and can reduce the computation. From above examples, we see that the size of matrix operations for this method are smaller than the two-phase simplex method, and the number of iterations of this method less than or equal the two-phase simplex method. However, the proposed method is designed for a 2-dimensional linear programming problem which is not suitable for real-world problems. But we can use this idea to establish the algorithm for n-dimensional linear programming problem.

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