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## LAMPIRAN

**Lampiran 1.** Hasil Perhitungan Simpleks Menggunakan Software LINDO proses *Fuzzyfikasi* untuk  $t = 0$

a. Input

```

Max 10000X1 + 11000X2 + 10000X3 + 11000X4 + 12000X5

Subject to

25X1 + 35 X2 + 40X3 + 35X4 + 25X5 <= 17760
10X1 + 10 X2 + 10X3 + 10X4 + 10X5 <= 10000
100X1 + 100X2 + 100X3 + 100X4 + 100X5 <=120000
X1 + X2 + X3 + X4 + X5 <=353
8X3 + 6X5 <=2500
15X1 <=1500
4X2 <=1000
4X4 <=1000
8X5 <=750
X1 >=41
X2 >=33
X3 >=70
X4 >=50
X5 >=8

End |

```

b. Output

```

LP OPTIMUM FOUND AT STEP      6

      OBJECTIVE FUNCTION VALUE

    1)      3865750.

      VARIABLE            VALUE            REDUCED COST
      X1                   41.000000           0.000000
      X2                   33.000000           0.000000
      X3                   70.000000           0.000000
      X4                  115.250000           0.000000
      X5                   93.750000           0.000000

```

**Lampiran 2.** Hasil Perhitungan Simpleks Menggunakan Software LINDO proses *Fuzzyfikasi* untuk  $t = 1$

## a. Input

```

Max 10000X1 + 11000X2 + 10000X3 + 11000X4 + 12000X5
Subject to
25X1 + 35 X2 + 40X3 + 35X4 + 25X5 <= 35520
10X1 + 10 X2 + 10X3 + 10X4 + 10X5 <= 10500
100X1 + 100X2 + 100X3 + 100X4 + 100X5 <=132000
X1 + X2 + X3 + X4 + X5 <=353
8X3 + 6X5 <=3000
15X1 <=2000
4X2 <=1500
4X4 <=1500
8X5 <=1500
X1 >=41
X2 >=33
X3 >=70
X4 >=50
X5 >=8
End

```

## b. Output

```

LP OPTIMUM FOUND AT STEP      1
      OBJECTIVE FUNCTION VALUE
    1)      3931000.

```

VARIABLE	VALUE	REDUCED COST
X1	41.000000	0.000000
X2	33.000000	0.000000
X3	70.000000	0.000000
X4	50.000000	0.000000
X5	159.000000	0.000000

### Lampiran 3. Hasil Perhitungan Simpleks Menggunakan Software LINDO proses Defuzzyfikasi

## a. Input

```

Max Z
Subject to
-65250Z + 10000X1 + 11000X2 + 10000X3 + 11000X4 + 12000X5 >= 3865750
17760Z + 25X1 + 35X2 + 40X3 + 35X4 + 25X5 <= 35520
500Z + 10X1 + 10X2 + 10X3 + 10X4 + 10X5 <=10500
12000Z + 100X1 + 100X2 + 100X3 + 100X4 + 100X5 <= 132000
X1 + X2 + X3 + X4 + X5 <= 353
500Z + 8X3 + 6X5 <= 3000
500Z + 15X1 <= 2000
500Z + 4X2 <= 1500
500Z + 4X4 <= 1500
750Z + 8X5 <= 1500
X1 >= 41
X2 >= 33
X3 >= 70
X4 >= 50
X5 >= 8
END

```

b. Output

```

LP OPTIMUM FOUND AT STEP      7

      OBJECTIVE FUNCTION VALUE

    1)      0.5896226

VARIABLE      VALUE      REDUCED COST
   Z           0.589623      0.000000
   X1          41.000000      0.000000
   X2          33.000000      0.000000
   X3          70.000000      0.000000
   X4          76.777122      0.000000
   X5         132.222870      0.000000
    
```

**Lampiran 4.** Hasil Perhitungan Simpleks Menggunakan Software LINDO proses *Branch and Bound*

a. Input

Max 10000X1 + 11000X2 + 10000X3 + 11000X4 + 12000X5

Subject to

25X1 + 35 X2 + 40X3 + 35X4 + 25X5 <= 24864  
 10X1 + 10 X2 + 10X3 + 10X4 + 10X5 <= 10200  
 100X1 + 100X2 + 100X3 + 100X4 + 100X5 <=124800  
 X1 + X2 + X3 + X4 + X5 <=353  
 8X3 + 6X5 <=2700  
 15X1 <=1700  
 4X2 <=1200  
 4X4 <=1200  
 8X5 <=1050  
 X1 >=41  
 X2 >=33  
 X3 >=70  
 X4 >=50  
 X5 >=8

End

GIN X1

GIN X2

GIN X3

GIN X4

GIN X5

b. Output

```

NEW INTEGER SOLUTION OF      3903000.00      AT BRANCH      0 PIVOT      1
BOUND ON OPTIMUM: 3903000.
ENUMERATION COMPLETE. BRANCHES=      0 PIVOTS=      1

LAST INTEGER SOLUTION IS THE BEST FOUND
RE-INSTALLING BEST SOLUTION...

      OBJECTIVE FUNCTION VALUE

    1)      3903000.

VARIABLE      VALUE      REDUCED COST
   X1          41.000000     -10000.000000
   X2          33.000000     -11000.000000
   X3          70.000000     -10000.000000
   X4          78.000000     -11000.000000
   X5         131.000000     -12000.000000
    
```