

Lampiran 1 Input Lingo 11 Jadwal Produksi Tahun 2016-2017

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LINGO Model - terbaruuuu
Min = 1620705 *AR1 + 1620705 *AR2 + 1620705 *AR3 + 1620705 *AR4 + 1620705 *AR5 + 1620705 *AR6 + 1620705 *AR7 + 1620705 *AR8 + 1620705 *AR9 + 1620705 *AR10 + 1620705 *AR11 + 1620705 *AR12 + 1865647 *BR1 + 1865647 *BR2 + 1865647 *BR3 + 1865647 *BR4 + 1865647 *BR5 + 1865647 *BR6 + 1865647 *BR7 + 1865647 *BR8 + 1865647 *BR9 + 1865647 *BR10 + 1865647 *BR11 + 1865647 *BR12 + 1545791 *CR1 + 1545791 *CR2 + 1545791 *CR3 + 1545791 *CR4 + 1545791 *CR5 + 1545791 *CR6 + 1545791 *CR7 + 1545791 *CR8 + 1545791 *CR9 + 1545791 *CR10 + 1545791 *CR11 + 1545791 *CR12 + 1817048 *DR1 + 1817048 *DR2 + 1817048 *DR3 + 1817048 *DR4 + 1817048 *DR5 + 1817048 *DR6 + 1817048 *DR7 + 1817048 *DR8 + 1817048 *DR9 + 1817048 *DR10 + 1817048 *DR11 + 1817048 *DR12 + 1621300 *AL1 + 1621300 *AL2 + 1621300 *AL3 + 1621300 *AL4 + 1621300 *AL5 + 1621300 *AL6 + 1621300 *AL7 + 1621300 *AL8 + 1621300 *AL9 + 1621300 *AL10 + 1621300 *AL11 + 1621300 *AL12 + 1866440 *BL1 + 1866440 *BL2 + 1866440 *BL3 + 1866440 *BL4 + 1866440 *BL5 + 1866440 *BL6 + 1866440 *BL7 + 1866440 *BL8 + 1866440 *BL9 + 1866440 *BL10 + 1866440 *BL11 + 1866440 *BL12 + 1546240 *CL1 + 1546240 *CL2 + 1546240 *CL3 + 1546240 *CL4 + 1546240 *CL5 + 1546240 *CL6 + 1546240 *CL7 + 1546240 *CL8 + 1546240 *CL9 + 1546240 *CL10 + 1546240 *CL11 + 1546240 *CL12 + 1817529 *DL1 + 1817529 *DL2 + 1817529 *DL3 + 1817529 *DL4 + 1817529 *DL5 + 1817529 *DL6 + 1817529 *DL7 + 1817529 *DL8 + 1817529 *DL9 + 1817529 *DL10 + 1817529 *DL11 + 1817529 *DL12 + 13708 *AP1 + 13708 *AP2 + 13708 *AP3 + 13708 *AP4 + 13708 *AP5 + 13708 *AP6 + 13708 *AP7 + 13708 *AP8 + 13708 *AP9 + 13708 *AP10 + 13708 *AP11 + 13708 *AP12 + 15743 *BP1 + 15743 *BP2 + 15743 *BP3 + 15743 *BP4 + 15743 *BP5 + 15743 *BP6 + 15743 *BP7 + 15743 *BP8 + 15743 *BP9 +
AR1 + AL1 - AP1 = 2830;
AP1+ AR2 + AL2 - AP2 = 3227;
AP2 + AR3 + AL3 - AP3 = 2727;
AP3 + AR4 + AL4 - AP4 = 2527;
AP4 + AR5 + AL5 - AP5 = 2731;
AP5 + AR6 + AL6 - AP6 = 2466;
AP6 + AR7 + AL7 - AP7 = 2691;
AP7 + AR8 + AL8 - AP8 = 2273;
AP8 + AR9+ AL9 - AP9 = 2150;
AP9 + AR10 + AL10 - AP10 = 1957;
AP10 + AR11 + AL11 - AP11 = 2445;
AP11 + AR12 + AL12 - AP12 = 2447;

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$$\text{Min } Z = (1+2+3)$$

$$\begin{aligned}
 &= 1620705 *AR1 + 1620705 *AR2 + 1620705 *AR3 + 1620705 *AR4 + 1620705 *AR5 \\
 &+ 1620705 *AR6 + 1620705 *AR7 + 1620705 *AR8 + 1620705 *AR9 + 1620705 *AR10 \\
 &+ 1620705 *AR11 + 1620705 *AR12 + 1865647 *BR1 + 1865647 *BR2 + 1865647 \\
 &*BR3 + 1865647 *BR4 + 1865647 *BR5 + 1865647 *BR6 + 1865647 *BR7 + 1865647 \\
 &*BR8 + 1865647 *BR9 + 1865647 *BR10 + 1865647 *BR11 + 1865647 *BR12 + \\
 &1545791 *CR1 + 1545791 *CR2 + 1545791 *CR3 + 1545791 *CR4 + 1545791 *CR5 + \\
 &1545791 *CR6 + 1545791 *CR7 + 1545791 *CR8 + 1545791 *CR9 + 1545791 *CR10 + \\
 &1545791 *CR11 + 1545791 *CR12 + 1817048 *DR1 + 1817048 *DR2 + 1817048 *DR3 \\
 &+ 1817048 *DR4 + 1817048 *DR5 + 1817048 *DR6 + 1817048 *DR7 + 1817048 *DR8 + \\
 &1817048 *DR9 + 1817048 *DR10 + 1817048 *DR11 + 1817048 *DR12 + 1621300 *AL1 \\
 &+ 1621300 *AL2 + 1621300 *AL3 + 1621300 *AL4 + 1621300 *AL5 + 1621300 *AL6 + \\
 &1621300 *AL7 + 1621300 *AL8 + 1621300 *AL9 + 1621300 *AL10 + 1621300 *AL11 + \\
 &1621300 *AL12 + 1866440 *BL1 + 1866440 *BL2 + 1866440 *BL3 + 1866440 *BL4 + \\
 &1866440 *BL5 + 1866440 *BL6 + 1866440 *BL7 + 1866440 *BL8 + 1866440 *BL9 + \\
 &1866440 *BL10 + 1866440 *BL11 + 1866440 *BL12 + 1546240 *CL1 + 1546240 *CL2 + \\
 &1546240 *CL3 + 1546240 *CL4 + 1546240 *CL5 + 1546240 *CL6 + 1546240 *CL7 + \\
 &1546240 *CL8 + 1546240 *CL9 + 1546240 *CL10 + 1546240 *CL11 + 1546240 *CL12 + \\
 &1817529 *DL1 + 1817529 *DL2 + 1817529 *DL3 + 1817529 *DL4 + 1817529 *DL5 + \\
 &1817529 *DL6 + 1817529 *DL7 + 1817529 *DL8 + 1817529 *DL9 + 1817529 *DL10 + \\
 &1817529 *DL11 + 1817529 *DL12 + 13708 *AP1 + 13708 *AP2 + 13708 *AP3 + \\
 &13708 *AP4 + 13708 *AP5 + 13708 *AP6 + 13708 *AP7 + 13708 *AP8 + 13708 *AP9 + \\
 &13708 *AP10 + 13708 *AP11 + 13708 *AP12 + 15743 *BP1 + 15743 *BP2 + 15743 *BP3 + \\
 &15743 *BP4 + 15743 *BP5 + 15743 *BP6 + 15743 *BP7 + 15743 *BP8 + 15743 *BP9 +
 \end{aligned}$$

$$15743*BP10 + 15743*BP11 + 15743*BP12 + 13924*CP1 + 13924*CP2 + 13924*CP3 +$$

$$13924*CP4 + 13924*CP5 + 13924*CP6 + 13924*CP7 + 13924*CP8 + 13924*CP9 +$$

$$13924*CP10 + 13924*CP11 + 13924*CP12 + 16111*DP1 + 16111*DP2 + 16111*DP3 +$$

$$16111*DP4 + 16111*DP5 + 16111*DP6 + 16111*DP7 + 16111*DP8 + 16111*DP9 +$$

$$16111*DP10 + 16111*DP11 + 16111*DP12;$$

FUNGSI PEMBATAS

$$AR1+AL1-AP1 = 2830$$

$$AP1+AR2+AL2-AP2= 3227$$

$$AP2+AR3+AL3-AP3= 2727$$

$$AP3+AR4+AL4-AP4= 2527$$

$$AP4+AR5+AL5-AP5= 2731$$

$$AP5+AR6+AL6-AP6= 2691$$

$$AP6+AR7+AL7-AP7= 2691$$

$$AP7+AR8+AL8-AP8= 2273$$

$$AP8+AR9+AL9-AP9= 2150$$

$$AP9+AR10+AL10-AP10= 1957$$

$$AP10+AR11+AL11-AP11= 2445$$

$$AP11+AR12+AL12-AP12= 2447$$

$$BR1+BL1-BP1 = 2163$$

$$BP1+BR2+BL2-BP2= 3111$$

$$BP2+BR3+BL3-BP3= 2566$$

$$BP3+BR4+BL4-BP4= 2503$$

$$BP4+BR5+BL5-BP5= 2346$$

$$BP5+BR6+BL6-BP6= 2639$$

$$BP6+BR7+BL7-BP7= 2018$$

$$BP7+BR8+BL8-BP8= 2271$$

$$BP8+BR9+BL9-BP9= 1631$$

$$BP9+BR10+BL10-BP10= 1661$$

$$BP10+BR11+BL11-BP11= 1325$$

$$BP11+BR12+BL12-BP12= 1892$$

$$CR1+CL1-CP1 = 3721$$

$$CP1+CR2+CL2-CP2= 3719$$

$$CP2+CR3+CL3-CP3= 3777$$

$$CP3+CR4+CL4-CP4= 3149$$

$$CP4+CR5+CL5-CP5= 3104$$

$$CP5+CR6+CL6-CP6= 3653$$

$$CP6+CR7+CL7-CP7= 3103$$

$$CP7+CR8+CL8-CP8= 2534$$

$$CP8+CR9+CL9-CP9= 2647$$

$$CP9+CR10+CL10-CP10= 3220$$

$$CP10+CR11+CL11-CP11= 2814$$

$$CP11+CR12+CL12-CP12= 3757$$

$$DR1+DL1-DP1 = 4095$$

$$DP1+DR2+DL2-DP2= 4395$$

$$DP2+DR3+DL3-DP3= 4341$$

$$DP3+DR4+DL4-DP4= 4571$$

$$DP4+DR5+DL5-DP5= 4264$$

$$DP5+DR6+DL6-DP6= 4444$$

$$DP6+DR7+DL7-DP7= 3994$$

$$DP7+DR8+DL8-DP8= 3626$$

$$DP8+DR9+DL9-DP9= 3942$$

$$DP9+DR10+DL10-DP10= 3944$$

$$DP10+DR11+DL11-DP11=4002$$

$$DP11+DR12+DL12-DP12= 3206$$

$$AR1 \leq 5200$$

$$AR2 \leq 5200$$

$$AR3 \leq 5200$$

$$AR4 \leq 5200$$

$$AR5 \leq 5200$$

$$AR6 \leq 5200$$

$$AR7 \leq 5200$$

$$AR8 \leq 5200$$

$$AR9 \leq 5200$$

$$AR10 \leq 5200$$

$$AR11 \leq 5200$$

$$AR12 \leq 5200$$

$$BR1 \leq 3900$$

BR2 ≤ 3900

BR3 ≤ 3900

BR4 ≤ 3900

BR5 ≤ 3900

BR6 ≤ 3900

BR7 ≤ 3900

BR8 ≤ 3900

BR9 ≤ 3900

BR10 ≤ 3900

BR11 ≤ 3900

BR12 ≤ 3900

CR1 ≤ 4052

CR2 ≤ 4052

CR3 ≤ 4052

CR4 ≤ 4052

CR5 ≤ 4052

CR6 ≤ 4052

CR7 ≤ 4052

CR8 ≤ 4052

CR9 ≤ 4052

CR10 ≤ 4052

CR11 ≤ 4052

CR12 ≤ 4052

DR1 ≤ 3771

DR2 ≤ 3771

DR3 ≤ 3771

DR4 ≤ 3771

DR5 ≤ 3771

DR6 ≤ 3771

DR7 ≤ 3771

DR8 ≤ 3771

DR9 ≤ 3771

DR10 \leq 3771

DR11 \leq 3771

DR12 \leq 3771

AL1 \leq 2600

AL2 \leq 2600

AL3 \leq 2600

AL4 \leq 2600

AL5 \leq 2600

AL6 \leq 2600

AL7 \leq 2600

AL8 \leq 2600

AL9 \leq 2600

AL10 \leq 2600

AL11 \leq 2600

AL12 \leq 2600

BL1 \leq 1950

BL2 \leq 1950

BL3 \leq 1950

BL4 \leq 1950

BL5 \leq 1950

BL6 \leq 1950

BL7 \leq 1950

BL8 \leq 1950

BL9 \leq 1950

BL10 \leq 1950

BL11 \leq 1950

BL12 \leq 1950

CL1 \leq 2026

CL2 \leq 2026

CL3 \leq 2026

CL4 \leq 2026

CL5 \leq 2026

CL6 ≤ 2026

CL7 ≤ 2026

CL8 ≤ 2026

CL9 ≤ 2026

CL10 ≤ 2026

CL11 ≤ 2026

CL12 ≤ 2026

DL1 ≤ 1882

DL2 ≤ 1882

DL3 ≤ 1882

DL4 ≤ 1882

DL5 ≤ 1882

DL6 ≤ 1882

DL7 ≤ 1882

DL8 ≤ 1882

DL9 ≤ 1882

DL10 ≤ 1882

DL11 ≤ 1882

DL12 ≤ 1882

AP1 ≤ 3800

AP2 ≤ 3800

AP3 ≤ 3800

AP4 ≤ 3800

AP5 ≤ 3800

AP6 ≤ 3800

AP7 ≤ 3800

AP8 ≤ 3800

AP9 ≤ 3800

AP10 ≤ 3800

AP11 ≤ 3800

AP12 ≤ 3800

BP1 ≤ 3800

BP2 \leq 3800

BP3 \leq 3800

BP4 \leq 3800

BP5 \leq 3800

BP6 \leq 3800

BP7 \leq 3800

BP8 \leq 3800

BP9 \leq 3800

BP10 \leq 3800

BP11 \leq 3800

BP12 \leq 3800

CP1 \leq 4000

CP2 \leq 4000

CP3 \leq 4000

CP4 \leq 4000

CP5 \leq 4000

CP6 \leq 4000

CP7 \leq 4000

CP8 \leq 4000

CP9 \leq 4000

CP10 \leq 4000

CP11 \leq 4000

CP12 \leq 4000

DP1 \leq 4000

DP2 \leq 4000

DP3 \leq 4000

DP4 \leq 4000

DP5 \leq 4000

DP6 \leq 4000

DP7 \leq 4000

DP8 \leq 4000

DP9 \leq 4000

$$DP10 \leq 4000$$

$$DP11 \leq 4000$$

$$DP12 \leq 4000$$

$$AP1 \geq 101$$

$$AP2 \geq 101$$

$$AP3 \geq 101$$

$$AP4 \geq 101$$

$$AP5 \geq 101$$

$$AP6 \geq 101$$

$$AP7 \geq 101$$

$$AP8 \geq 101$$

$$AP9 \geq 101$$

$$AP10 \geq 101$$

$$AP11 \geq 101$$

$$AP12 \geq 101$$

$$BP1 \geq 158$$

$$BP2 \geq 158$$

$$BP3 \geq 158$$

$$BP4 \geq 158$$

$$BP5 \geq 158$$

$$BP6 \geq 158$$

$$BP7 \geq 158$$

$$BP8 \geq 158$$

$$BP9 \geq 158$$

$$BP10 \geq 158$$

$$BP11 \geq 158$$

$$BP12 \geq 158$$

$$CP1 \geq 121$$

$$CP2 \geq 121$$

$$CP3 \geq 121$$

$$CP4 \geq 121$$

$$CP5 \geq 121$$

$$CP6 \geq 121$$

$$\text{CP7} \geq 121$$

$$\text{CP8} \geq 121$$

$$\text{CP9} \geq 121$$

$$\text{CP10} \geq 121$$

$$\text{CP11} \geq 121$$

$$\text{CP12} \geq 121$$

$$\text{DP1} \geq 132$$

$$\text{DP2} \geq 132$$

$$\text{DP3} \geq 132$$

$$\text{DP4} \geq 132$$

$$\text{DP5} \geq 132$$

$$\text{DP6} \geq 132$$

$$\text{DP7} \geq 132$$

$$\text{DP8} \geq 132$$

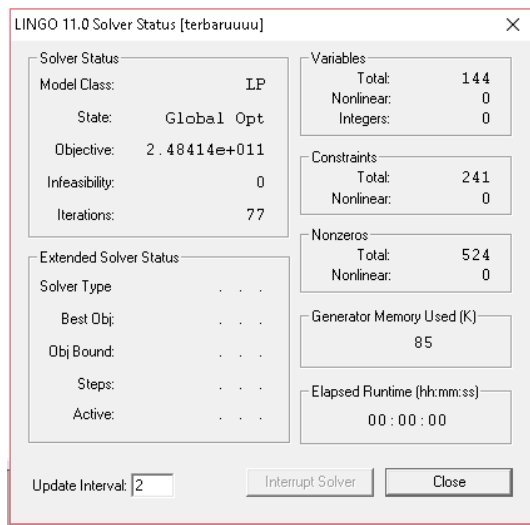
$$\text{DP9} \geq 132$$

$$\text{DP10} \geq 132$$

$$\text{DP11} \geq 132$$

$$\text{DP12} \geq 132$$

Lampiran 2 Output Lingo 11 Jadwal Produksi Tahun 2016-2017



Global optimal solution found.

Objective value: 0.2484135E+12

Infeasibilities: 0.000000

Total solver iterations: 77

| Variable | Value | Reduced Cost |
|----------|----------|--------------|
| AR1 | 2931.000 | 0.000000 |
| AR2 | 3227.000 | 0.000000 |
| AR3 | 2727.000 | 0.000000 |
| AR4 | 2527.000 | 0.000000 |
| AR5 | 2731.000 | 0.000000 |
| AR6 | 2466.000 | 0.000000 |
| AR7 | 2691.000 | 0.000000 |
| AR8 | 2273.000 | 0.000000 |
| AR9 | 2150.000 | 0.000000 |
| AR10 | 1957.000 | 0.000000 |
| AR11 | 2445.000 | 0.000000 |
| AR12 | 2447.000 | 0.000000 |
| BR1 | 2321.000 | 0.000000 |
| BR2 | 3111.000 | 0.000000 |
| BR3 | 2566.000 | 0.000000 |
| BR4 | 2503.000 | 0.000000 |
| BR5 | 2346.000 | 0.000000 |
| BR6 | 2639.000 | 0.000000 |
| BR7 | 2018.000 | 0.000000 |
| BR8 | 2271.000 | 0.000000 |
| BR9 | 1631.000 | 0.000000 |
| BR10 | 1661.000 | 0.000000 |
| BR11 | 1325.000 | 0.000000 |
| BR12 | 1892.000 | 0.000000 |
| CR1 | 3842.000 | 0.000000 |
| CR2 | 3719.000 | 0.000000 |
| CR3 | 3777.000 | 0.000000 |

| | | |
|------|----------|----------|
| CR4 | 3149.000 | 0.000000 |
| CR5 | 3104.000 | 0.000000 |
| CR6 | 3653.000 | 0.000000 |
| CR7 | 3103.000 | 0.000000 |
| CR8 | 2534.000 | 0.000000 |
| CR9 | 2647.000 | 0.000000 |
| CR10 | 3220.000 | 0.000000 |
| CR11 | 2814.000 | 0.000000 |
| CR12 | 3757.000 | 0.000000 |
| DR1 | 3771.000 | 0.000000 |
| DR2 | 3771.000 | 0.000000 |
| DR3 | 3771.000 | 0.000000 |
| DR4 | 3771.000 | 0.000000 |
| DR5 | 3771.000 | 0.000000 |
| DR6 | 3771.000 | 0.000000 |
| DR7 | 3771.000 | 0.000000 |
| DR8 | 3626.000 | 0.000000 |
| DR9 | 3771.000 | 0.000000 |
| DR10 | 3771.000 | 0.000000 |
| DR11 | 3771.000 | 0.000000 |
| DR12 | 3206.000 | 0.000000 |
| AL1 | 0.000000 | 595.0000 |
| AL2 | 0.000000 | 595.0000 |
| AL3 | 0.000000 | 595.0000 |
| AL4 | 0.000000 | 595.0000 |
| AL5 | 0.000000 | 595.0000 |
| AL6 | 0.000000 | 595.0000 |
| AL7 | 0.000000 | 595.0000 |
| AL8 | 0.000000 | 595.0000 |
| AL9 | 0.000000 | 595.0000 |
| AL10 | 0.000000 | 595.0000 |
| AL11 | 0.000000 | 595.0000 |
| AL12 | 0.000000 | 595.0000 |
| BL1 | 0.000000 | 793.0000 |
| BL2 | 0.000000 | 793.0000 |
| BL3 | 0.000000 | 793.0000 |
| BL4 | 0.000000 | 793.0000 |
| BL5 | 0.000000 | 793.0000 |
| BL6 | 0.000000 | 793.0000 |
| BL7 | 0.000000 | 793.0000 |
| BL8 | 0.000000 | 793.0000 |
| BL9 | 0.000000 | 793.0000 |
| BL10 | 0.000000 | 793.0000 |
| BL11 | 0.000000 | 793.0000 |
| BL12 | 0.000000 | 793.0000 |
| CL1 | 0.000000 | 449.0000 |
| CL2 | 0.000000 | 449.0000 |
| CL3 | 0.000000 | 449.0000 |
| CL4 | 0.000000 | 449.0000 |
| CL5 | 0.000000 | 449.0000 |

| | | |
|------|----------|----------|
| CL6 | 0.000000 | 449.0000 |
| CL7 | 0.000000 | 449.0000 |
| CL8 | 0.000000 | 449.0000 |
| CL9 | 0.000000 | 449.0000 |
| CL10 | 0.000000 | 449.0000 |
| CL11 | 0.000000 | 449.0000 |
| CL12 | 0.000000 | 449.0000 |
| DL1 | 456.0000 | 0.000000 |
| DL2 | 624.0000 | 0.000000 |
| DL3 | 570.0000 | 0.000000 |
| DL4 | 800.0000 | 0.000000 |
| DL5 | 493.0000 | 0.000000 |
| DL6 | 673.0000 | 0.000000 |
| DL7 | 223.0000 | 0.000000 |
| DL8 | 0.000000 | 481.0000 |
| DL9 | 171.0000 | 0.000000 |
| DL10 | 173.0000 | 0.000000 |
| DL11 | 231.0000 | 0.000000 |
| DL12 | 0.000000 | 481.0000 |
| AP1 | 101.0000 | 0.000000 |
| AP2 | 101.0000 | 0.000000 |
| AP3 | 101.0000 | 0.000000 |
| AP4 | 101.0000 | 0.000000 |
| AP5 | 101.0000 | 0.000000 |
| AP6 | 101.0000 | 0.000000 |
| AP7 | 101.0000 | 0.000000 |
| AP8 | 101.0000 | 0.000000 |
| AP9 | 101.0000 | 0.000000 |
| AP10 | 101.0000 | 0.000000 |
| AP11 | 101.0000 | 0.000000 |
| AP12 | 101.0000 | 0.000000 |
| BP1 | 158.0000 | 0.000000 |
| BP2 | 158.0000 | 0.000000 |
| BP3 | 158.0000 | 0.000000 |
| BP4 | 158.0000 | 0.000000 |
| BP5 | 158.0000 | 0.000000 |
| BP6 | 158.0000 | 0.000000 |
| BP7 | 158.0000 | 0.000000 |
| BP8 | 158.0000 | 0.000000 |
| BP9 | 158.0000 | 0.000000 |
| BP10 | 158.0000 | 0.000000 |
| BP11 | 158.0000 | 0.000000 |
| BP12 | 158.0000 | 0.000000 |
| CP1 | 121.0000 | 0.000000 |
| CP2 | 121.0000 | 0.000000 |
| CP3 | 121.0000 | 0.000000 |
| CP4 | 121.0000 | 0.000000 |
| CP5 | 121.0000 | 0.000000 |
| CP6 | 121.0000 | 0.000000 |
| CP7 | 121.0000 | 0.000000 |

| | | |
|------|----------|----------|
| CP8 | 121.0000 | 0.000000 |
| CP9 | 121.0000 | 0.000000 |
| CP10 | 121.0000 | 0.000000 |
| CP11 | 121.0000 | 0.000000 |
| CP12 | 121.0000 | 0.000000 |
| DP1 | 132.0000 | 0.000000 |
| DP2 | 132.0000 | 0.000000 |
| DP3 | 132.0000 | 0.000000 |
| DP4 | 132.0000 | 0.000000 |
| DP5 | 132.0000 | 0.000000 |
| DP6 | 132.0000 | 0.000000 |
| DP7 | 132.0000 | 0.000000 |
| DP8 | 132.0000 | 0.000000 |
| DP9 | 132.0000 | 0.000000 |
| DP10 | 132.0000 | 0.000000 |
| DP11 | 132.0000 | 0.000000 |
| DP12 | 132.0000 | 0.000000 |

| Row | Slack or Surplus | Dual Price |
|-----|------------------|------------|
| 1 | 0.2484135E+12 | -1.000000 |
| 2 | 0.000000 | -1620705. |
| 3 | 0.000000 | -1620705. |
| 4 | 0.000000 | -1620705. |
| 5 | 0.000000 | -1620705. |
| 6 | 0.000000 | -1620705. |
| 7 | 0.000000 | -1620705. |
| 8 | 0.000000 | -1620705. |
| 9 | 0.000000 | -1620705. |
| 10 | 0.000000 | -1620705. |
| 11 | 0.000000 | -1620705. |
| 12 | 0.000000 | -1620705. |
| 13 | 0.000000 | -1620705. |
| 14 | 0.000000 | -1865647. |
| 15 | 0.000000 | -1865647. |
| 16 | 0.000000 | -1865647. |
| 17 | 0.000000 | -1865647. |
| 18 | 0.000000 | -1865647. |
| 19 | 0.000000 | -1865647. |
| 20 | 0.000000 | -1865647. |
| 21 | 0.000000 | -1865647. |
| 22 | 0.000000 | -1865647. |
| 23 | 0.000000 | -1865647. |
| 24 | 0.000000 | -1865647. |
| 25 | 0.000000 | -1865647. |
| 26 | 0.000000 | -1545791. |
| 27 | 0.000000 | -1545791. |
| 28 | 0.000000 | -1545791. |
| 29 | 0.000000 | -1545791. |
| 30 | 0.000000 | -1545791. |
| 31 | 0.000000 | -1545791. |

| | | |
|----|----------|-----------|
| 32 | 0.000000 | -1545791. |
| 33 | 0.000000 | -1545791. |
| 34 | 0.000000 | -1545791. |
| 35 | 0.000000 | -1545791. |
| 36 | 0.000000 | -1545791. |
| 37 | 0.000000 | -1545791. |
| 38 | 0.000000 | -1817529. |
| 39 | 0.000000 | -1817529. |
| 40 | 0.000000 | -1817529. |
| 41 | 0.000000 | -1817529. |
| 42 | 0.000000 | -1817529. |
| 43 | 0.000000 | -1817529. |
| 44 | 0.000000 | -1817529. |
| 45 | 0.000000 | -1817048. |
| 46 | 0.000000 | -1817529. |
| 47 | 0.000000 | -1817529. |
| 48 | 0.000000 | -1817529. |
| 49 | 0.000000 | -1817048. |
| 50 | 2269.000 | 0.000000 |
| 51 | 1973.000 | 0.000000 |
| 52 | 2473.000 | 0.000000 |
| 53 | 2673.000 | 0.000000 |
| 54 | 2469.000 | 0.000000 |
| 55 | 2734.000 | 0.000000 |
| 56 | 2509.000 | 0.000000 |
| 57 | 2927.000 | 0.000000 |
| 58 | 3050.000 | 0.000000 |
| 59 | 3243.000 | 0.000000 |
| 60 | 2755.000 | 0.000000 |
| 61 | 2753.000 | 0.000000 |
| 62 | 1579.000 | 0.000000 |
| 63 | 789.0000 | 0.000000 |
| 64 | 1334.000 | 0.000000 |
| 65 | 1397.000 | 0.000000 |
| 66 | 1554.000 | 0.000000 |
| 67 | 1261.000 | 0.000000 |
| 68 | 1882.000 | 0.000000 |
| 69 | 1629.000 | 0.000000 |
| 70 | 2269.000 | 0.000000 |
| 71 | 2239.000 | 0.000000 |
| 72 | 2575.000 | 0.000000 |
| 73 | 2008.000 | 0.000000 |
| 74 | 210.0000 | 0.000000 |
| 75 | 333.0000 | 0.000000 |
| 76 | 275.0000 | 0.000000 |
| 77 | 903.0000 | 0.000000 |
| 78 | 948.0000 | 0.000000 |
| 79 | 399.0000 | 0.000000 |
| 80 | 949.0000 | 0.000000 |
| 81 | 1518.000 | 0.000000 |

| | | |
|-----|----------|----------|
| 82 | 1405.000 | 0.000000 |
| 83 | 832.0000 | 0.000000 |
| 84 | 1238.000 | 0.000000 |
| 85 | 295.0000 | 0.000000 |
| 86 | 0.000000 | 481.0000 |
| 87 | 0.000000 | 481.0000 |
| 88 | 0.000000 | 481.0000 |
| 89 | 0.000000 | 481.0000 |
| 90 | 0.000000 | 481.0000 |
| 91 | 0.000000 | 481.0000 |
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| 95 | 0.000000 | 481.0000 |
| 96 | 0.000000 | 481.0000 |
| 97 | 565.0000 | 0.000000 |
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| 103 | 2600.000 | 0.000000 |
| 104 | 2600.000 | 0.000000 |
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| | | |
|-----|----------|----------|
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| 165 | 3642.000 | 0.000000 |
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| 181 | 3879.000 | 0.000000 |

| | | |
|-----|----------|-----------|
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| 201 | 0.000000 | -13708.00 |
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| 231 | 0.000000 | -16111.00 |

| | | |
|-----|----------|-----------|
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| 241 | 0.000000 | -1833159. |

Lampiran 3 Biaya Produksi

a. Perhitungan Biaya Produksi Tahun 2015-2016

| Jenis Rokok | SKM 12 | | SKM 16 | | |
|--------------|------------------|------------------|------------------|------------------|---------------|
| | Biaya Produksi | Biaya Persediaan | Biaya produksi | Biaya Persediaan | Biaya lembur |
| bulan/biaya | Rp1.620.705 | Rp13.708 | Rp1.865.647 | Rp15.742 | Rp1.866.440 |
| Jul-15 | Rp5.662.743.270 | Rp1.411.924 | Rp7.276.023.300 | Rp3.636.402 | Rp85.856.240 |
| Agu-15 | Rp5.367.774.960 | Rp2.933.512 | Rp7.276.023.300 | Rp3.101.174 | Rp69.058.280 |
| Sep-15 | Rp5.197.600.935 | Rp1.507.880 | Rp6.604.390.380 | Rp2.392.784 | |
| Okt-15 | Rp4.912.356.855 | Rp2.851.264 | Rp7.276.023.300 | Rp1.369.554 | Rp302.363.280 |
| Nov-15 | Rp5.197.600.935 | Rp2.919.804 | Rp6.369.318.858 | Rp0 | |
| Des-15 | Rp4.536.353.295 | Rp0 | Rp6.755.507.787 | Rp1.196.392 | |
| Jan-16 | Rp4.664.388.990 | Rp808.772 | Rp5.818.952.993 | Rp1.290.844 | |
| Feb-16 | Rp4.375.903.500 | Rp0 | Rp5.507.389.944 | Rp0 | |
| Mar-16 | Rp4.277.040.495 | Rp0 | Rp5.421.570.182 | Rp0 | |
| Apr-16 | Rp4.020.969.105 | Rp0 | Rp4.766.728.085 | Rp645.422 | |
| Mei-16 | Rp4.366.179.270 | Rp1.782.040 | Rp5.606.269.235 | Rp0 | |
| Jun-16 | Rp4.387.248.435 | Rp0 | Rp5.425.301.476 | Rp1.243.618 | |
| Total biaya | Rp56.966.160.045 | Rp14.215.196 | Rp74.103.498.840 | Rp14.876.190 | Rp457.277.800 |
| Jumlah Total | Rp56.980.375.241 | | Rp74.575.652.830 | | |

b. Biaya Produksi Menggunakan Metode Linear Programming Tahun 2015-2016

| Jenis Rokok | SKM 12 | | SKM 16 | |
|--------------|------------------|------------------|------------------|------------------|
| | Biaya Produksi | Biaya Persediaan | Biaya produksi | Biaya Persediaan |
| bulan/biaya | Rp1.620.705 | Rp13.708 | Rp1.865.647 | Rp15.742 |
| Jul-15 | Rp5.364.533.550 | Rp1.411.924 | Rp7.276.023.300 | Rp3.636.402 |
| Agu-15 | Rp5.251.084.200 | Rp2.933.512 | Rp7.276.023.300 | Rp3.101.174 |
| Sep-15 | Rp5.212.187.280 | Rp1.507.880 | Rp6.604.390.380 | Rp2.392.784 |
| Okt-15 | Rp5.341.843.680 | Rp2.851.264 | Rp7.276.023.300 | Rp1.369.554 |
| Nov-15 | Rp4.669.251.105 | Rp2.919.804 | Rp6.369.318.858 | Rp0 |
| Des-15 | Rp4.683.837.450 | Rp0 | Rp6.755.507.787 | Rp1.196.392 |
| Jan-16 | Rp4.371.041.385 | Rp808.772 | Rp5.818.952.993 | Rp1.290.844 |
| Feb-16 | Rp4.312.696.005 | Rp0 | Rp5.507.389.944 | Rp0 |
| Mar-16 | Rp4.510.422.015 | Rp0 | Rp5.421.570.182 | Rp0 |
| Apr-16 | Rp4.358.075.745 | Rp0 | Rp4.766.728.085 | Rp645.422 |
| Mei-16 | Rp4.126.314.930 | Rp1.782.040 | Rp5.606.269.235 | Rp0 |
| Jun-16 | Rp4.306.213.185 | Rp0 | Rp5.425.301.476 | Rp1.243.618 |
| Total biaya | Rp56.507.500.530 | Rp14.215.196 | Rp74.103.498.840 | Rp14.876.190 |
| Jumlah Total | Rp56.524.114.626 | | Rp73.694.918.627 | |

c. Perhitungan Biaya Produksi Tahun 2015-2016

| Jenis Rokok | SKT 12 | | | SKT 16 | | |
|--------------|------------------|------------------|---------------|------------------|------------------|-----------------|
| | Biaya Produksi | Biaya Persediaan | Biaya lembur | Biaya produksi | Biaya Persediaan | Biaya lembur |
| bulan/biaya | Rp1.545.791 | Rp13.924 | Rp1.546.240 | Rp1.817.048 | Rp16.111 | Rp1.817.529 |
| Jul-15 | Rp5.917.287.948 | Rp2.450.624 | | Rp6.852.088.008 | Rp2.368.317 | Rp703.383.723 |
| Agu-15 | Rp6.263.545.132 | Rp2.548.092 | Rp21.647.360 | Rp6.852.088.008 | Rp3.673.308 | Rp1.192.299.024 |
| Sep-15 | Rp6.263.545.132 | Rp2.199.992 | Rp265.953.280 | Rp6.852.088.008 | Rp2.207.207 | Rp1.043.261.646 |
| Okt-15 | Rp5.513.836.497 | Rp1.211.388 | | Rp6.852.088.008 | Rp692.773 | Rp1.417.672.620 |
| Nov-15 | Rp5.762.708.848 | Rp2.450.624 | | Rp6.852.088.008 | Rp2.078.319 | Rp801.530.289 |
| Des-15 | Rp6.258.907.759 | Rp4.413.908 | | Rp6.852.088.008 | Rp1.047.215 | Rp1.117.780.335 |
| Jan-16 | Rp5.278.876.265 | Rp0 | | Rp6.581.347.856 | Rp0 | |
| Feb-16 | Rp4.876.970.605 | Rp0 | | Rp6.003.526.592 | Rp0 | |
| Mar-16 | Rp4.645.101.955 | Rp0 | | Rp6.772.137.896 | Rp3.012.757 | |
| Apr-16 | Rp5.611.221.330 | Rp1.629.108 | | Rp6.819.381.144 | Rp1.707.766 | |
| Mei-16 | Rp5.110.385.046 | Rp1.336.704 | | Rp6.399.643.056 | Rp3.673.308 | |
| Jun-16 | Rp5.926.562.694 | Rp0 | | Rp6.755.784.464 | Rp0 | |
| Total biaya | Rp67.428.949.211 | Rp18.240.440 | Rp287.600.640 | Rp80.444.349.056 | Rp20.460.970 | Rp6.275.927.637 |
| Jumlah Total | Rp67.734.790.291 | | | Rp86.740.737.663 | | |

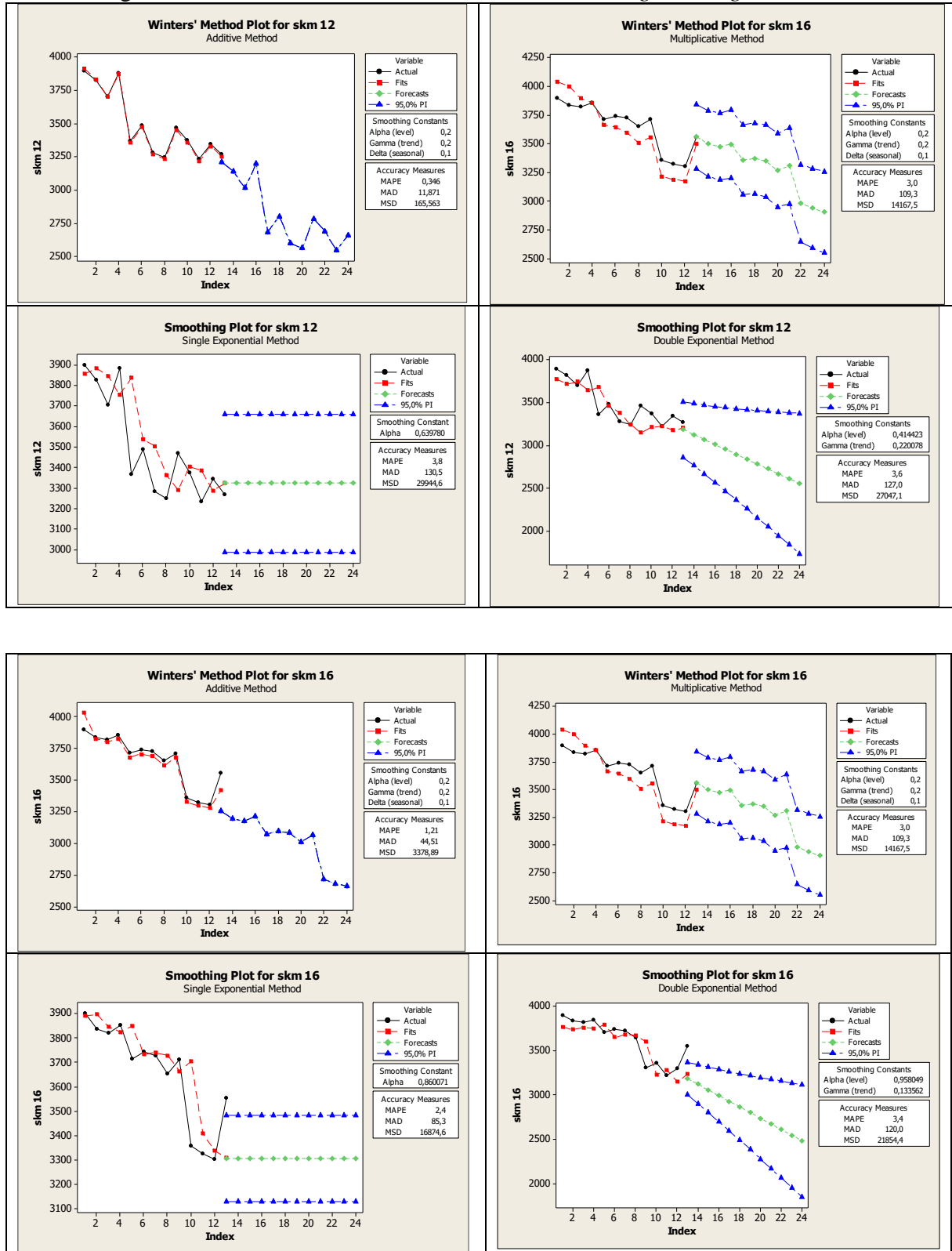
d. Biaya Produksi Menggunakan Metode Linear Programming Tahun 2015-2016

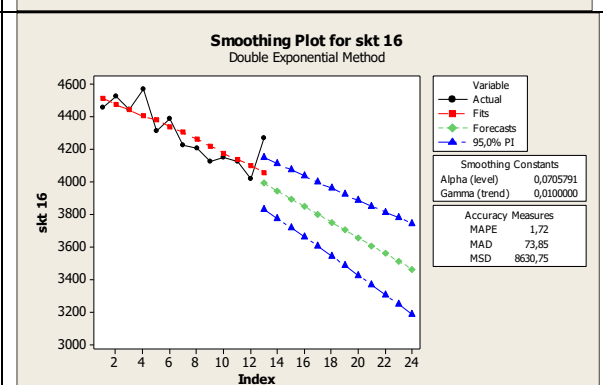
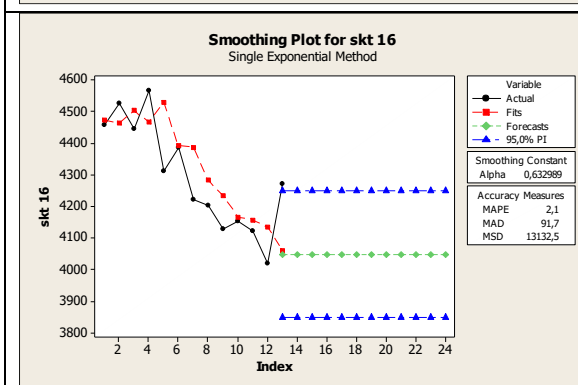
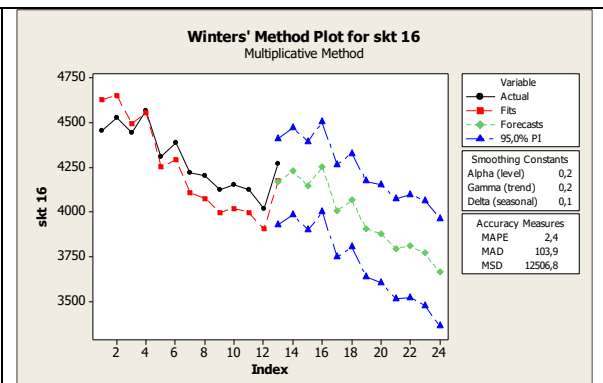
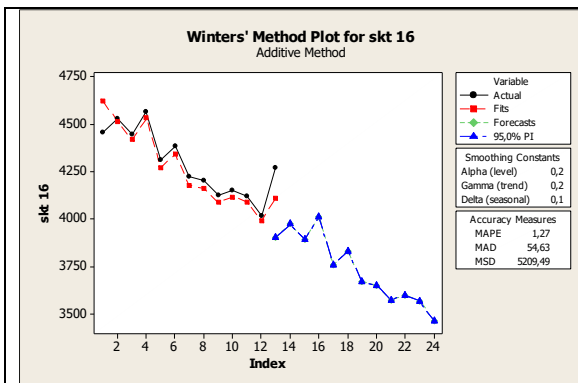
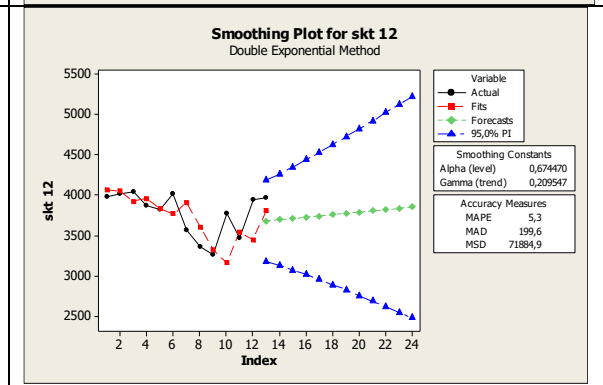
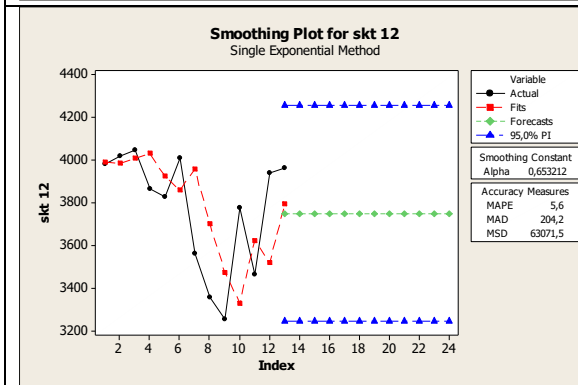
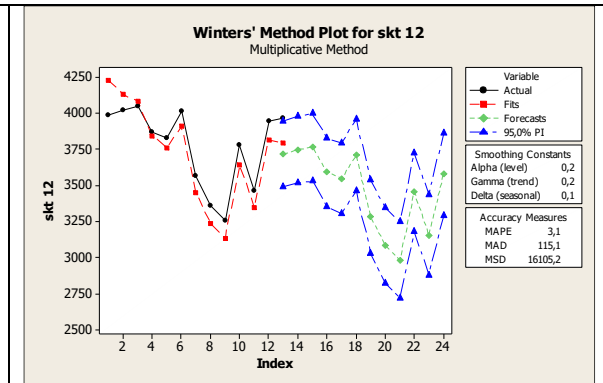
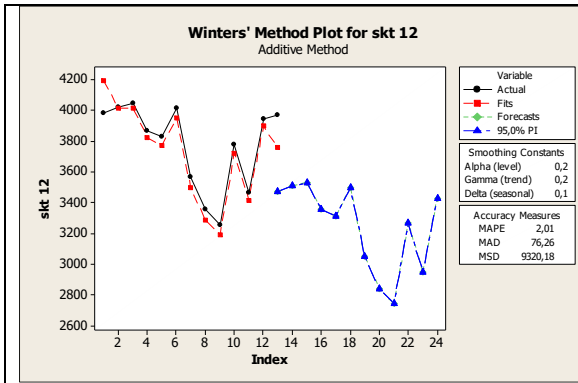
| Jenis Rokok | SKT 12 | | SKT 16 | | |
|-------------|-----------------|------------------|-----------------|------------------|-----------------|
| | Biaya Produksi | Biaya Persediaan | Biaya produksi | Biaya Persediaan | Biaya lembur |
| bulan/biaya | Rp1.545.791 | Rp13.924 | Rp1.817.048 | Rp16.111 | Rp1.817.529 |
| Jul-15 | Rp5.897.192.665 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp567.069.048 |
| Agu-15 | Rp6.099.691.286 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp521.630.823 |
| Sep-15 | Rp6.124.423.942 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp577.974.222 |
| Okt-15 | Rp5.547.843.899 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp1.070.524.581 |
| Nov-15 | Rp5.479.829.095 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp636.135.150 |
| Des-15 | Rp5.730.247.237 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp748.821.948 |
| Jan-16 | Rp5.693.148.253 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp425.301.786 |
| Feb-16 | Rp5.383.990.053 | Rp1.684.804 | Rp6.852.088.008 | Rp2.126.652 | Rp508.908.120 |
| Mar-16 | Rp4.918.706.962 | Rp1.684.804 | Rp6.850.270.960 | Rp2.126.652 | |

| Jenis Rokok | SKT 12 | | SKT 16 | | |
|--------------|------------------|------------------|------------------|------------------|-----------------|
| | Biaya Produksi | Biaya Persediaan | Biaya produksi | Biaya Persediaan | Biaya lembur |
| bulan/biaya | Rp1.545.791 | Rp13.924 | Rp1.817.048 | Rp16.111 | Rp1.817.529 |
| Apr-16 | Rp5.334.524.741 | Rp1.684.804 | Rp6.719.443.504 | Rp2.126.652 | |
| Mei-16 | Rp5.028.458.123 | Rp1.684.804 | Rp6.663.115.016 | Rp2.126.652 | |
| Jun-16 | Rp5.524.657.034 | Rp1.684.804 | Rp6.837.551.624 | Rp2.126.652 | |
| Total biaya | Rp66.762.713.290 | Rp20.217.648 | Rp81.887.085.168 | Rp25.519.824 | Rp4.122.155.772 |
| Jumlah Total | Rp66.782.930.938 | | Rp86.034.760.764 | | |

Lampiran 4 Tahapan Penjadwalan Induk Produksi Menggunakan *Linear Programming*

a. Perhitungan Peramalan Tahun 2015-2016 Untuk *Linear Programming*

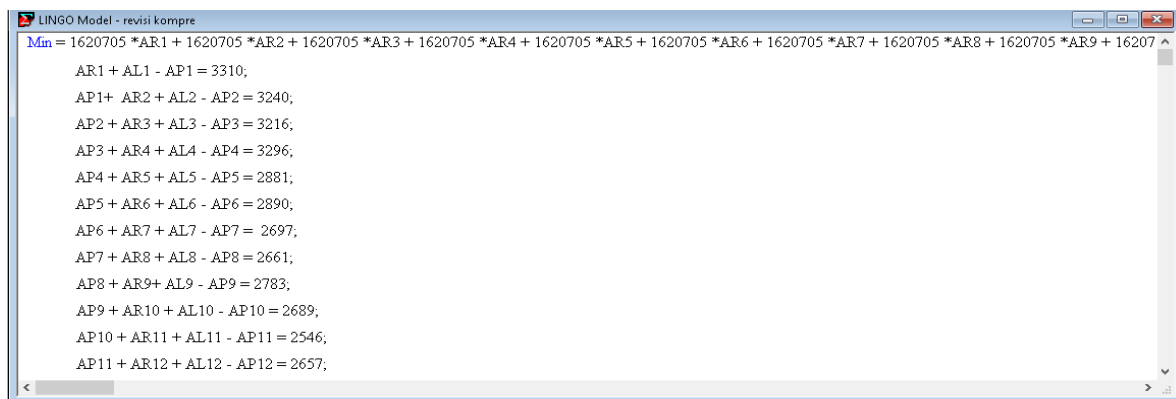




b. Hasil Peramalan Dilihat Dari Nilai Msd Pada Tahun 2015-2016 Untuk Linear Programming

| Bulan | Hasil Peramalan Perimtaan | | | |
|--------|---------------------------|--------|--------|--------|
| | SKM 12 | SKM 16 | SKT 12 | SKT 16 |
| Jul-15 | 3.310 | 3.756 | 3.815 | 4.083 |
| Agu-15 | 3.240 | 3.594 | 3.946 | 4.058 |
| Sep-15 | 3.216 | 3.378 | 3.962 | 4.089 |
| Okt-15 | 3.296 | 3.810 | 3.589 | 4.360 |
| Nov-15 | 2.881 | 3.571 | 3.545 | 4.121 |
| Des-15 | 2.890 | 3.098 | 3.707 | 4.183 |
| Jan-16 | 2.697 | 3.083 | 3.683 | 4.005 |
| Feb-16 | 2.661 | 3.109 | 3.483 | 4.051 |
| Mar-16 | 2.783 | 2.815 | 3.182 | 3.770 |
| Apr-16 | 2.689 | 2.982 | 3.451 | 3.698 |
| Mei-16 | 2.546 | 2.960 | 3.253 | 3.667 |
| Jun-16 | 2.657 | 3.329 | 3.574 | 3.763 |

c. *Input* Lingo 11 Jadwal Produksi Tahun 2015-2016



```

LINGO Model - revisi kompre
Min = 1620705 *AR1 + 1620705 *AR2 + 1620705 *AR3 + 1620705 *AR4 + 1620705 *AR5 + 1620705 *AR6 + 1620705 *AR7 + 1620705 *AR8 + 1620705 *AR9 + 1620705 *AR10 + 1620705 *AR11 + 1620705 *AR12 + 1865647 *BR1 + 1865647 *BR2 + 1865647 *BR3 + 1865647 *BR4 + 1865647 *BR5 + 1865647 *BR6 + 1865647 *BR7 + 1865647 *BR8 + 1865647 *BR9 + 1865647 *BR10 + 1865647 *BR11 + 1865647 *BR12 + 1545791 *CR1 + 1545791 *CR2 + 1545791 *CR3 + 1545791 *CR4 + 1545791 *CR5 + 1545791 *CR6 + 1545791 *CR7 + 1545791 *CR8 + 1545791 *CR9 + 1545791 *CR10 + 1545791 *CR11 + 1545791 *CR12 + 1817048 *DR1 + 1817048 *DR2 + 1817048 *DR3 + 1817048 *DR4 + 1817048 *DR5 + 1817048 *DR6 + 1817048 *DR7 + 1817048 *DR8 +

AR1 + AL1 - AP1 = 3310;
AP1+ AR2 + AL2 - AP2 = 3240;
AP2 + AR3 + AL3 - AP3 = 3216;
AP3 + AR4 + AL4 - AP4 = 3296;
AP4 + AR5 + AL5 - AP5 = 2881;
AP5 + AR6 + AL6 - AP6 = 2890;
AP6 + AR7 + AL7 - AP7 = 2697;
AP7 + AR8 + AL8 - AP8 = 2661;
AP8 + AR9 + AL9 - AP9 = 2783;
AP9 + AR10 + AL10 - AP10 = 2689;
AP10 + AR11 + AL11 - AP11 = 2546;
AP11 + AR12 + AL12 - AP12 = 2657;

```

Min Z = biaya produksi

$$\begin{aligned}
 &= 1620705 *AR1 + 1620705 *AR2 + 1620705 *AR3 + 1620705 *AR4 + 1620705 *AR5 \\
 &+ 1620705 *AR6 + 1620705 *AR7 + 1620705 *AR8 + 1620705 *AR9 + 1620705 *AR10 \\
 &+ 1620705 *AR11 + 1620705 *AR12 + 1865647 *BR1 + 1865647 *BR2 + 1865647 \\
 &*BR3 + 1865647 *BR4 + 1865647 *BR5 + 1865647 *BR6 + 1865647 *BR7 + 1865647 \\
 &*BR8 + 1865647 *BR9 + 1865647 *BR10 + 1865647 *BR11 + 1865647 *BR12 + \\
 &1545791 *CR1 + 1545791 *CR2 + 1545791 *CR3 + 1545791 *CR4 + 1545791 *CR5 + \\
 &1545791 *CR6 + 1545791 *CR7 + 1545791 *CR8 + 1545791 *CR9 + 1545791 *CR10 + \\
 &1545791 *CR11 + 1545791 *CR12 + 1817048 *DR1 + 1817048 *DR2 + 1817048 *DR3 \\
 &+ 1817048 *DR4 + 1817048 *DR5 + 1817048 *DR6 + 1817048 *DR7 + 1817048 *DR8 +
 \end{aligned}$$

$1817048 *DR9 + 1817048 *DR10 + 1817048 *DR11 + 1817048 *DR12 + 1621300 *AL1$
 $+ 1621300 *AL2 + 1621300 *AL3 + 1621300 *AL4 + 1621300 *AL5 + 1621300 *AL6 +$
 $1621300 *AL7 + 1621300 *AL8 + 1621300 *AL9 + 1621300 *AL10 + 1621300 *AL11 +$
 $1621300 *AL12 + 1866440 *BL1 + 1866440 *BL2 + 1866440 *BL3 + 1866440 *BL4 +$
 $1866440 *BL5 + 1866440 *BL6 + 1866440 *BL7 + 1866440 *BL8 + 1866440 *BL9 +$
 $1866440 *BL10 + 1866440 *BL11 + 1866440 *BL12 + 1546240 *CL1 + 1546240 *CL2 +$
 $1546240 *CL3 + 1546240 *CL4 + 1546240 *CL5 + 1546240 *CL6 + 1546240 *CL7 +$
 $1546240 *CL8 + 1546240 *CL9 + 1546240 *CL10 + 1546240 *CL11 + 1546240 *CL12 +$
 $1817529 *DL1 + 1817529 *DL2 + 1817529 *DL3 + 1817529 *DL4 + 1817529 *DL5 +$
 $1817529 *DL6 + 1817529 *DL7 + 1817529 *DL8 + 1817529 *DL9 + 1817529 *DL10 +$
 $1817529 *DL11 + 1817529 *DL12 + 13708 *AP1 + 13708 *AP2 + 13708 *AP3 +$
 $13708 *AP4 + 13708 *AP5 + 13708 *AP6 + 13708 *AP7 + 13708 *AP8 + 13708 *AP9 +$
 $13708 *AP10 + 13708 *AP11 + 13708 *AP12 + 15743 *BP1 + 15743 *BP2 + 15743 *BP3 +$
 $15743 *BP4 + 15743 *BP5 + 15743 *BP6 + 15743 *BP7 + 15743 *BP8 + 15743 *BP9 +$
 $15743 *BP10 + 15743 *BP11 + 15743 *BP12 + 13924 *CP1 + 13924 *CP2 + 13924 *CP3 +$
 $13924 *CP4 + 13924 *CP5 + 13924 *CP6 + 13924 *CP7 + 13924 *CP8 + 13924 *CP9 +$
 $13924 *CP10 + 13924 *CP11 + 13924 *CP12 + 16111 *DP1 + 16111 *DP2 + 16111 *DP3 +$
 $16111 *DP4 + 16111 *DP5 + 16111 *DP6 + 16111 *DP7 + 16111 *DP8 + 16111 *DP9 +$
 $16111 *DP10 + 16111 *DP11 + 16111 *DP12;$

FUNGSI PEMBATAS

$AR1 + AL1 - AP1 = 3310;$
 $AP1 + AR2 + AL2 - AP2 = 3240;$
 $AP2 + AR3 + AL3 - AP3 = 3216;$
 $AP3 + AR4 + AL4 - AP4 = 3296;$
 $AP4 + AR5 + AL5 - AP5 = 2881;$
 $AP5 + AR6 + AL6 - AP6 = 2890;$
 $AP6 + AR7 + AL7 - AP7 = 2697;$
 $AP7 + AR8 + AL8 - AP8 = 2661;$
 $AP8 + AR9 + AL9 - AP9 = 2783;$
 $AP9 + AR10 + AL10 - AP10 = 2689;$
 $AP10 + AR11 + AL11 - AP11 = 2546;$
 $AP11 + AR12 + AL12 - AP12 = 2657;$
 $BR1 + BL1 - BP1 = 3756;$
 $BP1 + BR2 + BL2 - BP2 = 3594 ;$

$$\begin{aligned}BP2 + BR3 + BL3 - BP3 &= 3378; \\BP3 + BR4 + BL4 - BP4 &= 3810; \\BP4 + BR5 + BL5 - BP5 &= 3571; \\BP5 + BR6 + BL6 - BP6 &= 3098; \\BP6 + BR7 + BL7 - BP7 &= 3083; \\BP7 + BR8 + BL8 - BP8 &= 3109; \\BP8 + BR9 + BL9 - BP9 &= 2815; \\BP9 + BR10 + BL10 - BP10 &= 2982; \\BP10 + BR11 + BL11 - BP11 &= 2960; \\BP11 + BR12 + BL12 - BP12 &= 3329; \\CR1 + CL1 - CP1 &= 3815; \\CP1 + CR2 + CL2 - CP2 &= 3946; \\CP2 + CR3 + CL3 - CP3 &= 3962; \\CP3 + CR4 + CL4 - CP4 &= 3589; \\CP4 + CR5 + CL5 - CP5 &= 3545; \\CP5 + CR6 + CL6 - CP6 &= 3707; \\CP6 + CR7 + CL7 - CP7 &= 3683; \\CP7 + CR8 + CL8 - CP8 &= 3483; \\CP8 + CR9 + CL9 - CP9 &= 3182; \\CP9 + CR10 + CL10 - CP10 &= 3451; \\CP10 + CR11 + CL11 - CP11 &= 3253; \\CP11 + CR12 + CL12 - CP12 &= 3574; \\DR1 + DL1 - DP1 &= 4083; \\DP1 + DR2 + DL2 - DP2 &= 4058; \\DP2 + DR3 + DL3 - DP3 &= 4089; \\DP3 + DR4 + DL4 - DP4 &= 4360; \\DP4 + DR5 + DL5 - DP5 &= 4121; \\DP5 + DR6 + DL6 - DP6 &= 4183; \\DP6 + DR7 + DL7 - DP7 &= 4005; \\DP7 + DR8 + DL8 - DP8 &= 4051; \\DP8 + DR9 + DL9 - DP9 &= 3770; \\DP9 + DR10 + DL10 - DP10 &= 3698; \\DP10 + DR11 + DL11 - DP11 &= 3667; \\DP11 + DR12 + DL12 - DP12 &= 3763;\end{aligned}$$

AR1 <= 5200;
AR2 <= 5200;
AR3 <= 5200;
AR4 <= 5200;
AR5 <= 5200;
AR6 <=5200;
AR7 <= 5200;
AR8 <= 5200;
AR9 <= 5200;
AR10 <= 5200;
AR11 <= 5200;
AR12 <= 5200;
BR1 <= 3900;
BR2 <= 3900;
BR3 <= 3900;
BR4 <= 3900;
BR5 <= 3900;
BR6 <=3900;
BR7 <= 3900;
BR8 <= 3900;
BR9 <= 3900;
BR10 <= 3900;
BR11 <= 3900;
BR12 <= 3900;
CR1 <= 4052;
CR2 <= 4052;
CR3 <= 4052;
CR4 <= 4052;
CR5 <= 4052;
CR6 <= 4052;
CR7 <= 4052;
CR8 <= 4052;
CR9 <= 4052;
CR10 <= 4052;

CR11 <= 4052;
CR12 <= 4052;
DR1 <= 3771;
DR2 <= 3771;
DR3 <= 3771;
DR4 <= 3771;
DR5 <= 3771;
DR6 <= 3771;
DR7 <= 3771;
DR8 <=3771;
DR9 <= 3771;
DR10 <= 3771;
DR11 <= 3771;
DR12 <= 3771;
AL1 <= 2600;
AL2 <= 2600;
AL3 <= 2600;
AL4 <= 2600;
AL5 <= 2600;
AL6 <= 2600;
AL7 <= 2600;
AL8 <= 2600;
AL9 <= 2600;
AL10 <= 2600;
AL11 <= 2600;
AL12 <= 2600;
BL1 <= 1950;
BL2 <= 1950;
BL3 <= 1950;
BL4 <= 1950;
BL5 <= 1950;
BL6 <= 1950;
BL7 <= 1950;
BL8 <= 1950;

BL9 <= 1950;
BL10 <= 1950;
BL11 <= 1950;
BL12 <= 1950;
CL1 <= 2026;
CL2 <= 2026;
CL3 <= 2026;
CL4 <= 2026;
CL5 <= 2026;
CL6 <= 2026;
CL7 <= 2026;
CL8 <= 2026;
CL9 <= 2026;
CL10 <= 2026;
CL11 <= 2026;
CL12 <= 2026;
DL1 <= 1882;
DL2 <= 1882;
DL3 <= 1882;
DL4 <= 1882;
DL5 <= 1882;
DL6 <= 1882;
DL7 <= 1882;
DL8 <= 1882;
DL9 <= 1882;
DL10 <= 1882;
DL11 <= 1882;
DL12 <= 1882;
AP1 <= 3800;
AP2 <= 3800;
AP3 <= 3800;
AP4 <= 3800;
AP5 <= 3800;
AP6 <= 3800;

AP7 <= 3800;
AP8 <= 3800;
AP9 <= 3800;
AP10 <= 3800;
AP11 <= 3800;
AP12 <= 3800;
BP1 <= 3800;
BP2 <= 3800;
BP3 <= 3800;
BP4 <= 3800;
BP5 <= 3800;
BP6 <= 3800;
BP7 <= 3800;
BP8 <= 3800;
BP9 <= 3800;
BP10 <= 3800;
BP11 <= 3800;
BP12 <= 3800;
CP1 <= 4000;
CP2 <= 4000;
CP3 <= 4000;
CP4 <= 4000;
CP5 <= 4000;
CP6 <= 4000;
CP7 <= 4000;
CP8 <= 4000;
CP9 <= 4000;
CP10 <= 4000;
CP11 <= 4000;
CP12 <= 4000;
DP1 <= 4000;
DP2 <= 4000;
DP3 <= 4000;
DP4 <= 4000;

DP5 \leq 4000;
DP6 \leq 4000;
DP7 \leq 4000;
DP8 \leq 4000;
DP9 \leq 4000;
DP10 \leq 4000;
DP11 \leq 4000;
DP12 \leq 4000;
AP1 \geq 101
AP2 \geq 101
AP3 \geq 101
AP4 \geq 101
AP5 \geq 101
AP6 \geq 101
AP7 \geq 101
AP8 \geq 101
AP9 \geq 101
AP10 \geq 101
AP11 \geq 101
AP12 \geq 101
BP1 \geq 158
BP2 \geq 158
BP3 \geq 158
BP4 \geq 158
BP5 \geq 158
BP6 \geq 158
BP7 \geq 158
BP8 \geq 158
BP9 \geq 158
BP10 \geq 158
BP11 \geq 158
BP12 \geq 158
CP1 \geq 121
CP2 \geq 121

$$\text{CP3} \geq 121$$

$$\text{CP4} \geq 121$$

$$\text{CP5} \geq 121$$

$$\text{CP6} \geq 121$$

$$\text{CP7} \geq 121$$

$$\text{CP8} \geq 121$$

$$\text{CP9} \geq 121$$

$$\text{CP10} \geq 121$$

$$\text{CP11} \geq 121$$

$$\text{CP12} \geq 121$$

$$\text{DP1} \geq 132$$

$$\text{DP2} \geq 132$$

$$\text{DP3} \geq 132$$

$$\text{DP4} \geq 132$$

$$\text{DP5} \geq 132$$

$$\text{DP6} \geq 132$$

$$\text{DP7} \geq 132$$

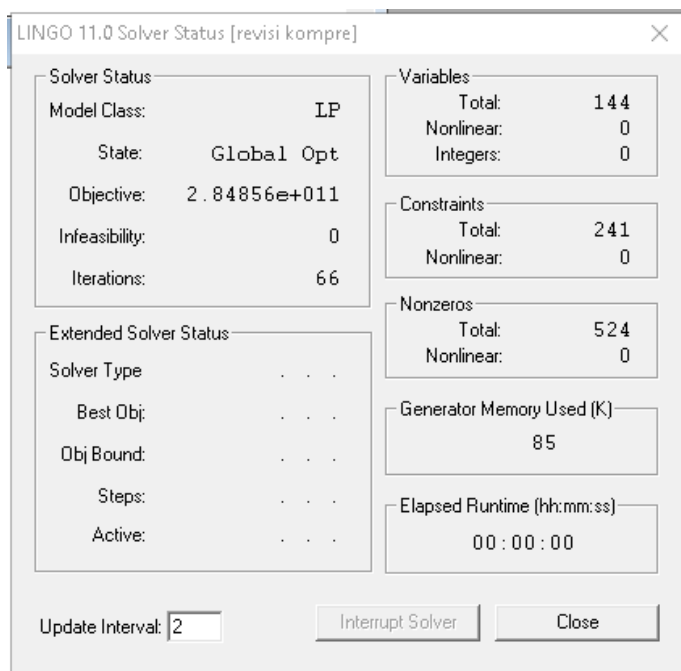
$$\text{DP8} \geq 132$$

$$\text{DP9} \geq 132$$

$$\text{DP10} \geq 132$$

$$\text{DP11} \geq 132$$

$$\text{DP12} \geq 132$$

d. *Output* Lingo 11 Jadwal Produksi Tahun 2015-2016

Global optimal solution found.
 Objective value: 0.2848564E+12
 Infeasibilities: 0.000000
 Total solver iterations: 66

| Variable | Value | Reduced Cost |
|----------|----------|--------------|
| AR1 | 3411.000 | 0.000000 |
| AR2 | 3240.000 | 0.000000 |
| AR3 | 3216.000 | 0.000000 |
| AR4 | 3296.000 | 0.000000 |
| AR5 | 2881.000 | 0.000000 |
| AR6 | 2890.000 | 0.000000 |
| AR7 | 2697.000 | 0.000000 |
| AR8 | 2661.000 | 0.000000 |
| AR9 | 2783.000 | 0.000000 |
| AR10 | 2689.000 | 0.000000 |
| AR11 | 2546.000 | 0.000000 |
| AR12 | 2657.000 | 0.000000 |
| BR1 | 3900.000 | 0.000000 |
| BR2 | 3594.000 | 0.000000 |
| BR3 | 3378.000 | 0.000000 |
| BR4 | 3810.000 | 0.000000 |
| BR5 | 3571.000 | 0.000000 |
| BR6 | 3098.000 | 0.000000 |
| BR7 | 3083.000 | 0.000000 |
| BR8 | 3109.000 | 0.000000 |
| BR9 | 2815.000 | 0.000000 |

| | | |
|------|----------|----------|
| BR10 | 2982.000 | 0.000000 |
| BR11 | 2960.000 | 0.000000 |
| BR12 | 3329.000 | 0.000000 |
| CR1 | 3936.000 | 0.000000 |
| CR2 | 3946.000 | 0.000000 |
| CR3 | 3962.000 | 0.000000 |
| CR4 | 3589.000 | 0.000000 |
| CR5 | 3545.000 | 0.000000 |
| CR6 | 3707.000 | 0.000000 |
| CR7 | 3683.000 | 0.000000 |
| CR8 | 3483.000 | 0.000000 |
| CR9 | 3182.000 | 0.000000 |
| CR10 | 3451.000 | 0.000000 |
| CR11 | 3253.000 | 0.000000 |
| CR12 | 3574.000 | 0.000000 |
| DR1 | 3771.000 | 0.000000 |
| DR2 | 3771.000 | 0.000000 |
| DR3 | 3771.000 | 0.000000 |
| DR4 | 3771.000 | 0.000000 |
| DR5 | 3771.000 | 0.000000 |
| DR6 | 3771.000 | 0.000000 |
| DR7 | 3771.000 | 0.000000 |
| DR8 | 3771.000 | 0.000000 |
| DR9 | 3770.000 | 0.000000 |
| DR10 | 3698.000 | 0.000000 |
| DR11 | 3667.000 | 0.000000 |
| DR12 | 3763.000 | 0.000000 |
| AL1 | 0.000000 | 595.0000 |
| AL2 | 0.000000 | 595.0000 |
| AL3 | 0.000000 | 595.0000 |
| AL4 | 0.000000 | 595.0000 |
| AL5 | 0.000000 | 595.0000 |
| AL6 | 0.000000 | 595.0000 |
| AL7 | 0.000000 | 595.0000 |
| AL8 | 0.000000 | 595.0000 |
| AL9 | 0.000000 | 595.0000 |
| AL10 | 0.000000 | 595.0000 |
| AL11 | 0.000000 | 595.0000 |
| AL12 | 0.000000 | 595.0000 |
| BL1 | 14.00000 | 0.000000 |
| BL2 | 0.000000 | 793.0000 |
| BL3 | 0.000000 | 793.0000 |
| BL4 | 0.000000 | 793.0000 |
| BL5 | 0.000000 | 793.0000 |
| BL6 | 0.000000 | 793.0000 |
| BL7 | 0.000000 | 793.0000 |
| BL8 | 0.000000 | 793.0000 |
| BL9 | 0.000000 | 793.0000 |
| BL10 | 0.000000 | 793.0000 |
| BL11 | 0.000000 | 793.0000 |

| | | |
|------|----------|----------|
| BL12 | 0.000000 | 793.0000 |
| CL1 | 0.000000 | 449.0000 |
| CL2 | 0.000000 | 449.0000 |
| CL3 | 0.000000 | 449.0000 |
| CL4 | 0.000000 | 449.0000 |
| CL5 | 0.000000 | 449.0000 |
| CL6 | 0.000000 | 449.0000 |
| CL7 | 0.000000 | 449.0000 |
| CL8 | 0.000000 | 449.0000 |
| CL9 | 0.000000 | 449.0000 |
| CL10 | 0.000000 | 449.0000 |
| CL11 | 0.000000 | 449.0000 |
| CL12 | 0.000000 | 449.0000 |
| DL1 | 444.0000 | 0.000000 |
| DL2 | 287.0000 | 0.000000 |
| DL3 | 318.0000 | 0.000000 |
| DL4 | 589.0000 | 0.000000 |
| DL5 | 350.0000 | 0.000000 |
| DL6 | 412.0000 | 0.000000 |
| DL7 | 234.0000 | 0.000000 |
| DL8 | 280.0000 | 0.000000 |
| DL9 | 0.000000 | 481.0000 |
| DL10 | 0.000000 | 481.0000 |
| DL11 | 0.000000 | 481.0000 |
| DL12 | 0.000000 | 481.0000 |
| AP1 | 101.0000 | 0.000000 |
| AP2 | 101.0000 | 0.000000 |
| AP3 | 101.0000 | 0.000000 |
| AP4 | 101.0000 | 0.000000 |
| AP5 | 101.0000 | 0.000000 |
| AP6 | 101.0000 | 0.000000 |
| AP7 | 101.0000 | 0.000000 |
| AP8 | 101.0000 | 0.000000 |
| AP9 | 101.0000 | 0.000000 |
| AP10 | 101.0000 | 0.000000 |
| AP11 | 101.0000 | 0.000000 |
| AP12 | 101.0000 | 0.000000 |
| BP1 | 158.0000 | 0.000000 |
| BP2 | 158.0000 | 0.000000 |
| BP3 | 158.0000 | 0.000000 |
| BP4 | 158.0000 | 0.000000 |
| BP5 | 158.0000 | 0.000000 |
| BP6 | 158.0000 | 0.000000 |
| BP7 | 158.0000 | 0.000000 |
| BP8 | 158.0000 | 0.000000 |
| BP9 | 158.0000 | 0.000000 |
| BP10 | 158.0000 | 0.000000 |
| BP11 | 158.0000 | 0.000000 |
| BP12 | 158.0000 | 0.000000 |
| CP1 | 121.0000 | 0.000000 |

| | | |
|------|----------|----------|
| CP2 | 121.0000 | 0.000000 |
| CP3 | 121.0000 | 0.000000 |
| CP4 | 121.0000 | 0.000000 |
| CP5 | 121.0000 | 0.000000 |
| CP6 | 121.0000 | 0.000000 |
| CP7 | 121.0000 | 0.000000 |
| CP8 | 121.0000 | 0.000000 |
| CP9 | 121.0000 | 0.000000 |
| CP10 | 121.0000 | 0.000000 |
| CP11 | 121.0000 | 0.000000 |
| CP12 | 121.0000 | 0.000000 |
| DP1 | 132.0000 | 0.000000 |
| DP2 | 132.0000 | 0.000000 |
| DP3 | 132.0000 | 0.000000 |
| DP4 | 132.0000 | 0.000000 |
| DP5 | 132.0000 | 0.000000 |
| DP6 | 132.0000 | 0.000000 |
| DP7 | 132.0000 | 0.000000 |
| DP8 | 132.0000 | 0.000000 |
| DP9 | 132.0000 | 0.000000 |
| DP10 | 132.0000 | 0.000000 |
| DP11 | 132.0000 | 0.000000 |
| DP12 | 132.0000 | 0.000000 |

| Row | Slack or Surplus | Dual Price |
|-----|------------------|------------|
| 1 | 0.2848564E+12 | -1.000000 |
| 2 | 0.000000 | -1620705. |
| 3 | 0.000000 | -1620705. |
| 4 | 0.000000 | -1620705. |
| 5 | 0.000000 | -1620705. |
| 6 | 0.000000 | -1620705. |
| 7 | 0.000000 | -1620705. |
| 8 | 0.000000 | -1620705. |
| 9 | 0.000000 | -1620705. |
| 10 | 0.000000 | -1620705. |
| 11 | 0.000000 | -1620705. |
| 12 | 0.000000 | -1620705. |
| 13 | 0.000000 | -1620705. |
| 14 | 0.000000 | -1866440. |
| 15 | 0.000000 | -1865647. |
| 16 | 0.000000 | -1865647. |
| 17 | 0.000000 | -1865647. |
| 18 | 0.000000 | -1865647. |
| 19 | 0.000000 | -1865647. |
| 20 | 0.000000 | -1865647. |
| 21 | 0.000000 | -1865647. |
| 22 | 0.000000 | -1865647. |
| 23 | 0.000000 | -1865647. |
| 24 | 0.000000 | -1865647. |
| 25 | 0.000000 | -1865647. |

| | | |
|----|----------|-----------|
| 26 | 0.000000 | -1545791. |
| 27 | 0.000000 | -1545791. |
| 28 | 0.000000 | -1545791. |
| 29 | 0.000000 | -1545791. |
| 30 | 0.000000 | -1545791. |
| 31 | 0.000000 | -1545791. |
| 32 | 0.000000 | -1545791. |
| 33 | 0.000000 | -1545791. |
| 34 | 0.000000 | -1545791. |
| 35 | 0.000000 | -1545791. |
| 36 | 0.000000 | -1545791. |
| 37 | 0.000000 | -1545791. |
| 38 | 0.000000 | -1817529. |
| 39 | 0.000000 | -1817529. |
| 40 | 0.000000 | -1817529. |
| 41 | 0.000000 | -1817529. |
| 42 | 0.000000 | -1817529. |
| 43 | 0.000000 | -1817529. |
| 44 | 0.000000 | -1817529. |
| 45 | 0.000000 | -1817529. |
| 46 | 0.000000 | -1817048. |
| 47 | 0.000000 | -1817048. |
| 48 | 0.000000 | -1817048. |
| 49 | 0.000000 | -1817048. |
| 50 | 1789.000 | 0.000000 |
| 51 | 1960.000 | 0.000000 |
| 52 | 1984.000 | 0.000000 |
| 53 | 1904.000 | 0.000000 |
| 54 | 2319.000 | 0.000000 |
| 55 | 2310.000 | 0.000000 |
| 56 | 2503.000 | 0.000000 |
| 57 | 2539.000 | 0.000000 |
| 58 | 2417.000 | 0.000000 |
| 59 | 2511.000 | 0.000000 |
| 60 | 2654.000 | 0.000000 |
| 61 | 2543.000 | 0.000000 |
| 62 | 0.000000 | 793.0000 |
| 63 | 306.0000 | 0.000000 |
| 64 | 522.0000 | 0.000000 |
| 65 | 90.00000 | 0.000000 |
| 66 | 329.0000 | 0.000000 |
| 67 | 802.0000 | 0.000000 |
| 68 | 817.0000 | 0.000000 |
| 69 | 791.0000 | 0.000000 |
| 70 | 1085.000 | 0.000000 |
| 71 | 918.0000 | 0.000000 |
| 72 | 940.0000 | 0.000000 |
| 73 | 571.0000 | 0.000000 |
| 74 | 116.0000 | 0.000000 |
| 75 | 106.0000 | 0.000000 |

| | | |
|-----|----------|----------|
| 76 | 90.00000 | 0.000000 |
| 77 | 463.0000 | 0.000000 |
| 78 | 507.0000 | 0.000000 |
| 79 | 345.0000 | 0.000000 |
| 80 | 369.0000 | 0.000000 |
| 81 | 569.0000 | 0.000000 |
| 82 | 870.0000 | 0.000000 |
| 83 | 601.0000 | 0.000000 |
| 84 | 799.0000 | 0.000000 |
| 85 | 478.0000 | 0.000000 |
| 86 | 0.000000 | 481.0000 |
| 87 | 0.000000 | 481.0000 |
| 88 | 0.000000 | 481.0000 |
| 89 | 0.000000 | 481.0000 |
| 90 | 0.000000 | 481.0000 |
| 91 | 0.000000 | 481.0000 |
| 92 | 0.000000 | 481.0000 |
| 93 | 0.000000 | 481.0000 |
| 94 | 1.000000 | 0.000000 |
| 95 | 73.00000 | 0.000000 |
| 96 | 104.0000 | 0.000000 |
| 97 | 8.000000 | 0.000000 |
| 98 | 2600.000 | 0.000000 |
| 99 | 2600.000 | 0.000000 |
| 100 | 2600.000 | 0.000000 |
| 101 | 2600.000 | 0.000000 |
| 102 | 2600.000 | 0.000000 |
| 103 | 2600.000 | 0.000000 |
| 104 | 2600.000 | 0.000000 |
| 105 | 2600.000 | 0.000000 |
| 106 | 2600.000 | 0.000000 |
| 107 | 2600.000 | 0.000000 |
| 108 | 2600.000 | 0.000000 |
| 109 | 2600.000 | 0.000000 |
| 110 | 1936.000 | 0.000000 |
| 111 | 1950.000 | 0.000000 |
| 112 | 1950.000 | 0.000000 |
| 113 | 1950.000 | 0.000000 |
| 114 | 1950.000 | 0.000000 |
| 115 | 1950.000 | 0.000000 |
| 116 | 1950.000 | 0.000000 |
| 117 | 1950.000 | 0.000000 |
| 118 | 1950.000 | 0.000000 |
| 119 | 1950.000 | 0.000000 |
| 120 | 1950.000 | 0.000000 |
| 121 | 1950.000 | 0.000000 |
| 122 | 2026.000 | 0.000000 |
| 123 | 2026.000 | 0.000000 |
| 124 | 2026.000 | 0.000000 |
| 125 | 2026.000 | 0.000000 |

| | | |
|-----|----------|----------|
| 126 | 2026.000 | 0.000000 |
| 127 | 2026.000 | 0.000000 |
| 128 | 2026.000 | 0.000000 |
| 129 | 2026.000 | 0.000000 |
| 130 | 2026.000 | 0.000000 |
| 131 | 2026.000 | 0.000000 |
| 132 | 2026.000 | 0.000000 |
| 133 | 2026.000 | 0.000000 |
| 134 | 1438.000 | 0.000000 |
| 135 | 1595.000 | 0.000000 |
| 136 | 1564.000 | 0.000000 |
| 137 | 1293.000 | 0.000000 |
| 138 | 1532.000 | 0.000000 |
| 139 | 1470.000 | 0.000000 |
| 140 | 1648.000 | 0.000000 |
| 141 | 1602.000 | 0.000000 |
| 142 | 1882.000 | 0.000000 |
| 143 | 1882.000 | 0.000000 |
| 144 | 1882.000 | 0.000000 |
| 145 | 1882.000 | 0.000000 |
| 146 | 3699.000 | 0.000000 |
| 147 | 3699.000 | 0.000000 |
| 148 | 3699.000 | 0.000000 |
| 149 | 3699.000 | 0.000000 |
| 150 | 3699.000 | 0.000000 |
| 151 | 3699.000 | 0.000000 |
| 152 | 3699.000 | 0.000000 |
| 153 | 3699.000 | 0.000000 |
| 154 | 3699.000 | 0.000000 |
| 155 | 3699.000 | 0.000000 |
| 156 | 3699.000 | 0.000000 |
| 157 | 3699.000 | 0.000000 |
| 158 | 3642.000 | 0.000000 |
| 159 | 3642.000 | 0.000000 |
| 160 | 3642.000 | 0.000000 |
| 161 | 3642.000 | 0.000000 |
| 162 | 3642.000 | 0.000000 |
| 163 | 3642.000 | 0.000000 |
| 164 | 3642.000 | 0.000000 |
| 165 | 3642.000 | 0.000000 |
| 166 | 3642.000 | 0.000000 |
| 167 | 3642.000 | 0.000000 |
| 168 | 3642.000 | 0.000000 |
| 169 | 3642.000 | 0.000000 |
| 170 | 3879.000 | 0.000000 |
| 171 | 3879.000 | 0.000000 |
| 172 | 3879.000 | 0.000000 |
| 173 | 3879.000 | 0.000000 |
| 174 | 3879.000 | 0.000000 |
| 175 | 3879.000 | 0.000000 |

| | | |
|-----|----------|-----------|
| 176 | 3879.000 | 0.000000 |
| 177 | 3879.000 | 0.000000 |
| 178 | 3879.000 | 0.000000 |
| 179 | 3879.000 | 0.000000 |
| 180 | 3879.000 | 0.000000 |
| 181 | 3879.000 | 0.000000 |
| 182 | 3868.000 | 0.000000 |
| 183 | 3868.000 | 0.000000 |
| 184 | 3868.000 | 0.000000 |
| 185 | 3868.000 | 0.000000 |
| 186 | 3868.000 | 0.000000 |
| 187 | 3868.000 | 0.000000 |
| 188 | 3868.000 | 0.000000 |
| 189 | 3868.000 | 0.000000 |
| 190 | 3868.000 | 0.000000 |
| 191 | 3868.000 | 0.000000 |
| 192 | 3868.000 | 0.000000 |
| 193 | 3868.000 | 0.000000 |
| 194 | 0.000000 | -13708.00 |
| 195 | 0.000000 | -13708.00 |
| 196 | 0.000000 | -13708.00 |
| 197 | 0.000000 | -13708.00 |
| 198 | 0.000000 | -13708.00 |
| 199 | 0.000000 | -13708.00 |
| 200 | 0.000000 | -13708.00 |
| 201 | 0.000000 | -13708.00 |
| 202 | 0.000000 | -13708.00 |
| 203 | 0.000000 | -13708.00 |
| 204 | 0.000000 | -13708.00 |
| 205 | 0.000000 | -1634413. |
| 206 | 0.000000 | -16536.00 |
| 207 | 0.000000 | -15743.00 |
| 208 | 0.000000 | -15743.00 |
| 209 | 0.000000 | -15743.00 |
| 210 | 0.000000 | -15743.00 |
| 211 | 0.000000 | -15743.00 |
| 212 | 0.000000 | -15743.00 |
| 213 | 0.000000 | -15743.00 |
| 214 | 0.000000 | -15743.00 |
| 215 | 0.000000 | -15743.00 |
| 216 | 0.000000 | -15743.00 |
| 217 | 0.000000 | -1881390. |
| 218 | 0.000000 | -13924.00 |
| 219 | 0.000000 | -13924.00 |
| 220 | 0.000000 | -13924.00 |
| 221 | 0.000000 | -13924.00 |
| 222 | 0.000000 | -13924.00 |
| 223 | 0.000000 | -13924.00 |
| 224 | 0.000000 | -13924.00 |
| 225 | 0.000000 | -13924.00 |

| | | |
|-----|----------|-----------|
| 226 | 0.000000 | -13924.00 |
| 227 | 0.000000 | -13924.00 |
| 228 | 0.000000 | -13924.00 |
| 229 | 0.000000 | -1559715. |
| 230 | 0.000000 | -16111.00 |
| 231 | 0.000000 | -16111.00 |
| 232 | 0.000000 | -16111.00 |
| 233 | 0.000000 | -16111.00 |
| 234 | 0.000000 | -16111.00 |
| 235 | 0.000000 | -16111.00 |
| 236 | 0.000000 | -16111.00 |
| 237 | 0.000000 | -16592.00 |
| 238 | 0.000000 | -16111.00 |
| 239 | 0.000000 | -16111.00 |
| 240 | 0.000000 | -16111.00 |
| 241 | 0.000000 | -1833159. |

Halaman ini sengaja dikosongkan