

LAMPIRAN

A. Perhitungan *penalty* tabel *Vogel's Approximation*

| Tujuan Sumber | Demak | Purwodadi | Klaten | Boyolali | Karanganyar | Sragen | Surakarta | Dummy | Supply | Penalty I | Penalty II | Penalty III |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-----------|------------|-------------|
| Semarang Gudang 1 | 235 2500 | 185 6500 | 335 8500 | 285 8500 | 135 6500 | 185 5500 | 285 7500 | 0 14.000 | 38.000 | 50 | 0 | 0 |
| Semarang Gudang 2 | 185 2000 | 235 6500 | 285 8500 | 335 8500 | 135 6500 | 135 5500 | 235 7500 | 0 14.000 | 23.500 | 50 | 50 | 0 |
| Demand | 4500 | 6500 | 8500 | 8500 | 6500 | 5500 | 7500 | 14.000 | 61.500 | | | |
| Penalty I | 50 | 50 | 50 | 50 | 0 | 50 | 50 | | | | | |
| Penalty II | 50 | 50 | 50 | 50 | 0 | 0 | 50 | | | | | |
| Penalty III | 50 | 0 | 50 | 50 | 0 | 0 | 50 | | | | | |
| Penalty IV | 50 | 0 | 0 | 50 | 0 | 0 | 50 | | | | | |
| Penalty V | 50 | 0 | 0 | 0 | 0 | 0 | 50 | | | | | |
| Penalty VI | 50 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Penalty VII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |

Baris *Penalty*:

- $C_{S1Sragen} 185 - C_{S1Karanganyar} 135 = 50$
- $C_{S2Demak} 185 - C_{S2Sragen} 135 = 50$

Kolom *Penalty*:

- $C_{S1Demak} 235 - C_{S2Demak} 185 = 50$
- $C_{S2Purwodadi} 235 - C_{S1Purwodadi} 185 = 50$
- $C_{S1Klaten} 335 - C_{S2Klaten} 285 = 50$
- $C_{S2Boyolali} 335 - C_{S1Boyolali} 285 = 50$
- $C_{S1Karanganyar} 135 - C_{S2Karanganyar} 135 = 0$
- $C_{S1Sragen} 185 - C_{S2Sragen} 135 = 50$
- $C_{S1Surakarta} 285 - C_{S2Surakarta} 235 = 50$