

DAFTAR PUSTAKA

- Amaliah, B., Fatichah, C., & Suryani, E. (2019). Total Opportunity Cost Matrix – Minimal Total: A New Approach to Determine Initial Basic Feasible Solution of a Transportation Problem. *Egyptian Informatics Journal*, 20(2), 131–141. <https://doi.org/10.1016/j.eij.2019.01.002>
- Heizer, J., Render, B., & Munson, C. (2016). *Operations Management: Sustainability and Supply Chain Management* (12 ed.). London: Pearson.
- Ikfan, N., & Masudin, D. I. (2013). Penentuan Rute Transportasi Terpendek Untuk Meminimalkan Biaya Menggunakan Metode Saving Matriks. *Jurnal Ilmiah Teknik Industri*, 12(2), 165–178.
- Kanthi, Y. A., & Kristanto, B. K. (2020). Implementasi Metode North West Corner Dan Stepping Stone Pada Pengiriman Barang Galeri Bimasakti. *Jurnal Teknologi Informasi Dan Ilmu Komputer*, 7(4), 845–852. <https://doi.org/10.25126/jtiik.202071625>
- Maswarni, Hermawan, H., & Kartono. (2019). *Riset Operasi*. Tangerang Selatan: Unpam Press. www.unpam.ac.id
- Meflinda, A., & Mahyarni. (2011). *Operations Research (Riset Operasi)*. Pekanbaru: Unri Press.
- Nelwan, C., Kekenusa, J. S., & Langi, Y. (2013). Optimasi Pendistribusian Air Dengan Menggunakan Metode Least Cost Dan Metode Modified (Studi Kasus: PDAM Kabupaten Minahasa Utara). *Jurnal Ilmiah Sains*, 13(1), 46–51.
- Rangkuti, A. (2013). *7 Model Riset Operasi dan Aplikasinya*. Surabaya: Brilian Internasional.
- Siang, J. J. (2014). *Riset Operasi dalam Pendekatan Algoritmis* (2 ed.). Yogyakarta: CV Andi.
- Syaifuddin, D. T. (2011). *Riset Operasi (Aplikasi Quantitative Analysis for Management)*. Malang: CV Citra Malang.

Taha, H. A. (2017). *Operations Research an Introduction* (10 ed.). London: Pearson Education.

LAMPIRAN

Perhitungan biaya pendistribusian Air Bersih menggunakan mobil tangki di Kota Makassar dengan estimasi pengeluaran biaya transportasi yang diperhitungkan adalah BBM solar sebesar 0,2 liter/km, sehingga bisa diperhitungkan harga BBM solar tahun 2021 Rp.5.150/liter, artinya pengeluaran yang dikeluarkan untuk distribusi air bersih menggunakan mobil tangki, yaitu sebesar Rp. 1.030/km. Perhitungan tersebut dapat dilihat di bawah ini:

1. IPA I – Kec. Biringkanaya : $Rp. 1.030 \times 15 \text{ km} = Rp. 15.450$
2. IPA I – Kec. Bontoala : $Rp. 1.030 \times 3 \text{ km} = Rp. 3.090$
3. IPA I – Kec. Makassar : $Rp. 1.030 \times 3 \text{ km} = Rp. 3.090$
4. IPA I – Kec. Mamajang : $Rp. 1.030 \times 2 \text{ km} = Rp. 2.060$
5. IPA I – Kec. Manggala : $Rp. 1.030 \times 9 \text{ km} = Rp. 9.270$
6. IPA I – Kec. Mariso : $Rp. 1.030 \times 2 \text{ km} = Rp. 2.060$
7. IPA I – Kec. Panakkukang : $Rp. 1.030 \times 6 \text{ km} = Rp. 6.180$
8. IPA I – Kec. Rappocini : $Rp. 1.030 \times 6 \text{ km} = Rp. 6.180$
9. IPA I – Kec. Tallo : $Rp. 1.030 \times 4 \text{ km} = Rp. 4.120$
10. IPA I – Kec. Tamalanrea : $Rp. 1.030 \times 12 \text{ km} = Rp. 12.360$
11. IPA I – Kec. Tamalate : $Rp. 1.030 \times 5 \text{ km} = Rp. 5.150$
12. IPA I – Kec. Ujung Pandang : $Rp. 1.030 \times 1 \text{ km} = Rp. 1.030$
13. IPA I – Kec. Ujung Tanah : $Rp. 1.030 \times 5 \text{ km} = Rp. 5.150$
14. IPA I – Kec. Wajo : $Rp. 1.030 \times 3 \text{ km} = Rp. 3.090$
15. IPA II – Kec. Biringkanaya : $Rp. 1.030 \times 10 \text{ km} = Rp. 10.300$
16. IPA II – Kec. Bontoala : $Rp. 1.030 \times 6 \text{ km} = Rp. 6.180$
17. IPA II – Kec. Makassar : $Rp. 1.030 \times 5 \text{ km} = Rp. 5.150$
18. IPA II – Kec. Mamajang : $Rp. 1.030 \times 7 \text{ km} = Rp. 7.210$
19. IPA II – Kec. Manggala : $Rp. 1.030 \times 5 \text{ km} = Rp. 5.150$
20. IPA II – Kec. Mariso : $Rp. 1.030 \times 9 \text{ km} = Rp. 9.270$
21. IPA II – Kec. Panakkukang : $Rp. 1.030 \times 1 \text{ km} = Rp. 1.030$
22. IPA II – Kec. Rappocini : $Rp. 1.030 \times 4 \text{ km} = Rp. 4.120$
23. IPA II – Kec. Tallo : $Rp. 1.030 \times 6 \text{ km} = Rp. 6.180$
24. IPA II – Kec. Tamalanrea : $Rp. 1.030 \times 7 \text{ km} = Rp. 7.210$
25. IPA II – Kec. Tamalate : $Rp. 1.030 \times 7 \text{ km} = Rp. 7.210$

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| 26. IPA II – Kec. Ujung Pandang | : Rp. $1.030 \times 6 \text{ km} = \text{Rp. } 6.180$ |
| 27. IPA II – Kec. Ujung Tanah | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 28. IPA II – Kec. Wajo | : Rp. $1.030 \times 7 \text{ km} = \text{Rp. } 7.210$ |
| 29. IPA III – Kec. Biringkanaya | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 30. IPA III – Kec. Bontoala | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 31. IPA III – Kec. Makassar | : Rp. $1.030 \times 9 \text{ km} = \text{Rp. } 9.270$ |
| 32. IPA III – Kec. Mamajang | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 33. IPA III – Kec. Manggala | : Rp. $1.030 \times 1 \text{ km} = \text{Rp. } 1.030$ |
| 34. IPA III – Kec. Mariso | : Rp. $1.030 \times 12 \text{ km} = \text{Rp. } 12.360$ |
| 35. IPA III – Kec. Panakkukang | : Rp. $1.030 \times 5 \text{ km} = \text{Rp. } 5.150$ |
| 36. IPA III – Kec. Rappocini | : Rp. $1.030 \times 6 \text{ km} = \text{Rp. } 6.180$ |
| 37. IPA III – Kec. Tallo | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 38. IPA III – Kec. Tamalanrea | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 39. IPA III – Kec. Tamalate | : Rp. $1.030 \times 10 \text{ km} = \text{Rp. } 10.300$ |
| 40. IPA III – Kec. Ujung Pandang | : Rp. $1.030 \times 10 \text{ km} = \text{Rp. } 10.300$ |
| 41. IPA III – Kec. Ujung Tanah | : Rp. $1.030 \times 13 \text{ km} = \text{Rp. } 13.390$ |
| 42. IPA III – Kec. Wajo | : Rp. $1.030 \times 12 \text{ km} = \text{Rp. } 12.360$ |
| 43. IPA IV – Kec. Biringkanaya | : Rp. $1.030 \times 19 \text{ km} = \text{Rp. } 19.570$ |
| 44. IPA IV – Kec. Bontoala | : Rp. $1.030 \times 7 \text{ km} = \text{Rp. } 7.210$ |
| 45. IPA IV – Kec. Makassar | : Rp. $1.030 \times 6 \text{ km} = \text{Rp. } 6.180$ |
| 46. IPA IV – Kec. Mamajang | : Rp. $1.030 \times 3 \text{ km} = \text{Rp. } 3.090$ |
| 47. IPA IV – Kec. Manggala | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 48. IPA IV – Kec. Mariso | : Rp. $1.030 \times 4 \text{ km} = \text{Rp. } 4.120$ |
| 49. IPA IV – Kec. Panakkukang | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 50. IPA IV – Kec. Rappocini | : Rp. $1.030 \times 7 \text{ km} = \text{Rp. } 7.210$ |
| 51. IPA IV – Kec. Tallo | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 52. IPA IV – Kec. Tamalanrea | : Rp. $1.030 \times 16 \text{ km} = \text{Rp. } 16.480$ |
| 53. IPA IV – Kec. Tamalate | : Rp. $1.030 \times 1 \text{ km} = \text{Rp. } 1.030$ |
| 54. IPA IV – Kec. Ujung Pandang | : Rp. $1.030 \times 6 \text{ km} = \text{Rp. } 6.180$ |
| 55. IPA IV – Kec. Ujung Tanah | : Rp. $1.030 \times 9 \text{ km} = \text{Rp. } 9.270$ |
| 56. IPA IV – Kec. Wajo | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 57. IPA V – Kec. Biringkanaya | : Rp. $1.030 \times 19 \text{ km} = \text{Rp. } 19.570$ |

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| 58. IPA V – Kec. Bontoala | : Rp. $1.030 \times 13 \text{ km} = \text{Rp. } 13.390$ |
| 59. IPA V – Kec. Makassar | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 60. IPA V – Kec. Mamajang | : Rp. $1.030 \times 9 \text{ km} = \text{Rp. } 9.270$ |
| 61. IPA V – Kec. Manggala | : Rp. $1.030 \times 8 \text{ km} = \text{Rp. } 8.240$ |
| 62. IPA V – Kec. Mariso | : Rp. $1.030 \times 11 \text{ km} = \text{Rp. } 11.330$ |
| 63. IPA V – Kec. Panakkukang | : Rp. $1.030 \times 9 \text{ km} = \text{Rp. } 9.270$ |
| 64. IPA V – Kec. Rappocini | : Rp. $1.030 \times 7 \text{ km} = \text{Rp. } 7.210$ |
| 65. IPA V – Kec. Tallo | : Rp. $1.030 \times 14 \text{ km} = \text{Rp. } 14.420$ |
| 66. IPA V – Kec. Tamalanrea | : Rp. $1.030 \times 16 \text{ km} = \text{Rp. } 16.480$ |
| 67. IPA V – Kec. Tamalate | : Rp. $1.030 \times 7 \text{ km} = \text{Rp. } 7.210$ |
| 68. IPA V – Kec. Ujung Pandang | : Rp. $1.030 \times 12 \text{ km} = \text{Rp. } 12.360$ |
| 69. IPA V – Kec. Ujung Tanah | : Rp. $1.030 \times 16 \text{ km} = \text{Rp. } 16.480$ |
| 70. IPA V – Kec. Wajo | : Rp. $1.030 \times 15 \text{ km} = \text{Rp. } 15.450$ |