



# LAMPIRAN



## 3. Penghematan Zona 1

- $S(W1, W3) = J(Dc, W1) + J(Dc, W3) - J(W1, W3)$   
 $= 14 \text{ Km} + 10 \text{ Km} - 8,8 \text{ Km} = 15,2 \text{ Km}$
- $S(W1, W4) = J(Dc, W1) + J(Dc, W4) - J(W1, W4)$   
 $= 14 \text{ Km} + 18 \text{ Km} - 20 \text{ Km} = 12 \text{ Km}$
- $S(W1, W5) = J(Dc, W1) + J(Dc, W5) - J(W1, W5)$   
 $= 14 \text{ Km} + 17 \text{ Km} - 14 \text{ Km} = 17 \text{ Km}$
- $S(W1, W6) = J(Dc, W1) + J(Dc, W6) - J(W1, W6)$   
 $= 14 \text{ Km} + 12 \text{ Km} - 1,4 \text{ Km} = 24,6 \text{ Km}$
- $S(W1, W7) = J(Dc, W7) + J(Dc, W7) - J(W1, W7)$   
 $= 14 \text{ Km} + 16 \text{ Km} - 13 \text{ Km} = 17 \text{ Km}$
- $S(W1, W8) = J(Dc, W1) + J(Dc, W8) - J(W1, W8)$   
 $= 14 \text{ Km} + 12 \text{ Km} - 2,3 \text{ Km} = 23,7 \text{ Km}$
- $S(W1, W9) = J(Dc, W1) + J(Dc, W9) - J(W1, W9)$   
 $= 14 \text{ Km} + 16 \text{ Km} - 9,3 \text{ Km} = 20,7 \text{ Km}$
- $S(W2, W3) = J(Dc, W2) + J(Dc, W3) - J(W2, W3)$   
 $= 8,7 \text{ Km} + 10 \text{ Km} - 4,2 \text{ Km} = 14,5 \text{ Km}$
- $S(W2, W4) = J(Dc, W2) + J(Dc, W4) - J(W2, W4)$   
 $= 8,7 \text{ Km} + 18 \text{ Km} - 11 \text{ Km} = 15,7 \text{ Km}$
- $S(W2, W5) = J(Dc, W2) + J(Dc, W5) - J(W2, W5)$   
 $= 8,7 \text{ Km} + 17 \text{ Km} - 13 \text{ Km} = 12,7 \text{ Km}$
- $S(W2, W6) = J(Dc, W2) + J(Dc, W6) - J(W2, W6)$   
 $= 8,7 \text{ Km} + 12 \text{ Km} - 6,2 \text{ Km} = 14,5 \text{ Km}$
- $S(W2, W7) = J(Dc, W2) + J(Dc, W7) - J(W2, W7)$   
 $= 8,7 \text{ Km} + 16 \text{ Km} - 10 \text{ Km} = 14,7 \text{ Km}$
- $S(W2, W8) = J(Dc, W2) + J(Dc, W8) - J(W2, W8)$   
 $= 8,7 \text{ Km} + 12 \text{ Km} - 6 \text{ Km} = 14,7 \text{ Km}$
- $S(W2, W9) = J(Dc, W2) + J(Dc, W9) - J(W2, W9)$   
 $= 8,7 \text{ Km} + 16 \text{ Km} - 7,9 \text{ Km} = 16,8 \text{ Km}$

- $S(W3, W4) = J(Dc, W3) + J(Dc, W4) - J(W3, W4)$   
 $= 10 \text{ Km} + 18 \text{ Km} - 15 \text{ Km} = 13 \text{ Km}$
- $S(W3, W5) = J(Dc, W3) + J(Dc, W5) - J(W3, W5)$   
 $= 10 \text{ Km} + 17 \text{ Km} - 10 \text{ Km} = 17 \text{ Km}$
- $S(W3, W6) = J(Dc, W3) + J(Dc, W6) - J(W3, W6)$   
 $= 10 \text{ Km} + 12 \text{ Km} - 6,9 \text{ Km} = 15,1 \text{ Km}$
- $S(W3, W7) = J(Dc, W3) + J(Dc, W7) - J(W3, W7)$   
 $= 10 \text{ Km} + 16 \text{ Km} - 8 \text{ Km} = 18 \text{ Km}$
- $S(W3, W8) = J(Dc, W3) + J(Dc, W8) - J(W3, W8)$   
 $= 10 \text{ Km} + 12 \text{ Km} - 6,7 \text{ Km} = 15,3 \text{ Km}$
- $S(W3, W9) = J(Dc, W3) + J(Dc, W9) - J(W3, W9)$   
 $= 10 \text{ Km} + 16 \text{ Km} - 8,7 \text{ Km} = 10,6 \text{ Km}$
- $S(W4, W5) = J(Dc, W4) + J(Dc, W5) - J(W4, W5)$   
 $= 18 \text{ Km} + 17 \text{ Km} - 13 \text{ Km} = 22 \text{ Km}$
- $S(W4, W6) = J(Dc, W4) + J(Dc, W6) - J(W4, W6)$   
 $= 18 \text{ Km} + 12 \text{ Km} - 14 \text{ Km} = 16 \text{ Km}$
- $S(W4, W7) = J(Dc, W4) + J(Dc, W7) - J(W4, W7)$   
 $= 18 \text{ Km} + 16 \text{ Km} - 7 \text{ Km} = 27 \text{ Km}$
- $S(W4, W8) = J(Dc, W4) + J(Dc, W8) - J(W4, W8)$   
 $= 18 \text{ Km} + 12 \text{ Km} - 14 \text{ Km} = 16 \text{ Km}$
- $S(W4, W9) = J(Dc, W4) + J(Dc, W9) - J(W4, W9)$   
 $= 18 \text{ Km} + 16 \text{ Km} - 15 \text{ Km} = 19 \text{ Km}$
- $S(W5, W6) = J(Dc, W5) + J(Dc, W6) - J(W5, W6)$   
 $= 17 \text{ Km} + 12 \text{ Km} - 14 \text{ Km} = 15 \text{ Km}$
- $S(W5, W7) = J(Dc, W5) + J(Dc, W7) - J(W5, W7)$   
 $= 17 \text{ Km} + 16 \text{ Km} - 5,5 \text{ Km} = 27,5 \text{ Km}$
- $S(W5, W8) = J(Dc, W5) + J(Dc, W8) - J(W5, W8)$   
 $= 17 \text{ Km} + 12 \text{ Km} - 11 \text{ Km} = 18 \text{ Km}$
- $S(W5, W9) = J(Dc, W5) + J(Dc, W9) - J(W5, W9)$

- $$= 17 \text{ Km} + 16 \text{ Km} - 5 \text{ Km} = 28 \text{ Km}$$
- $$\bullet \text{ S (W6,W7)} = J(\text{Dc,W6}) + J(\text{Dc,W7}) - J(\text{W6,W7})$$

$$= 12 \text{ Km} + 16 \text{ Km} - 14 \text{ Km} = 14 \text{ Km}$$
- $$\bullet \text{ S (W6,W8)} = J(\text{Dc,W6}) + J(\text{Dc,W8}) - J(\text{W6,W8})$$

$$= 12 \text{ Km} + 12 \text{ Km} - 1,6 \text{ Km} = 22,4 \text{ Km}$$
- $$\bullet \text{ S (W6,W9)} = J(\text{Dc,W6}) + J(\text{Dc,W8}) - J(\text{W6,W9})$$

$$= 12 \text{ Km} + 16 \text{ Km} - 7,2 \text{ Km} = 20,8 \text{ Km}$$
- $$\bullet \text{ S (W7,W8)} = J(\text{Dc,W7}) + J(\text{Dc,W8}) - J(\text{W7,W8})$$

$$= 16 \text{ Km} + 12 \text{ Km} - 13 \text{ Km} = 15 \text{ Km}$$
- $$\bullet \text{ S (W7,W9)} = J(\text{Dc,W7}) + J(\text{Dc,W8}) - J(\text{W7,W8})$$

$$= 16 \text{ Km} + 16 \text{ Km} - 9,8 \text{ Km} = 22,2 \text{ Km}$$
- $$\bullet \text{ S (W8,W9)} = J(\text{Dc,W7}) + J(\text{Dc,W8}) - J(\text{W8,W9})$$

$$= 12 \text{ Km} + 16 \text{ Km} - 6,9 \text{ Km} = 21,1 \text{ Km}$$

#### Penghematan Zona 2

- $$\bullet \text{ S (W10,W11)} = J(\text{Dc,W10}) + J(\text{Dc,W11}) - J(\text{W10,W11})$$

$$= 123 \text{ Km} + 89 \text{ Km} - 33 \text{ Km} = 179 \text{ Km}$$

#### Penghematan Zona 3

- $$\bullet \text{ S (W12,W13)} = J(\text{Dc,W12}) + J(\text{Dc,W13}) - J(\text{W12,W13})$$

$$= 127 \text{ Km} + 128 \text{ Km} - 1,5 \text{ Km} = 253,5 \text{ Km}$$

#### Penghematan Zona 4

- $$\bullet \text{ S (W14,W15)} = J(\text{Dc,W14}) + J(\text{Dc,W15}) - J(\text{W14,W15})$$

$$= 94 \text{ Km} + 95 \text{ Km} - 2,4 \text{ Km} = 186,6 \text{ Km}$$