

Nama : Demitries Baskhara Rivaldo Tolla

NIM : 123180137

Kelas : C

Nama: Demitries Baskhara Rivaldo Tolla  
NIM: 123180137  
Kelas: C

**Soal**

	Gudang A	Gudang B	Gudang C	Kapasitas
Pabrik U	32	33	34	106
Pabrik P	36	42	38	132
Pabrik N	34	37	40	127
Kebutuhan	122	152	91	365

**a. NWC**

	A	B	C	
U	$(32)^{106}$	33	34	0
P	36	42	38	132
N	34	37	40	127
L	16	152	91	

	A	B	C	
U	$(32)^{106}$	33	34	0
P	$(36)^{16}$	42	38	116
N	34	37	40	127
L	0	152	91	

	A	B	C	
U	$(32)^{106}$	33	34	0
P	$(36)^{16}$	$(42)^{116}$	38	0
N	34	37	40	127
L	0	36	91	

	A	B	C	
U	$(32)^{106}$	33	34	0
P	$(36)^{16}$	$(42)^{116}$	38	0
N	34	$(37)^{36}$	$(40)^{91}$	0
L	0	0	0	

Total biaya:  $(32 \times 106) + (16 \times 36) + (42 \times 116) + (36 \times 37) + (40 \times 91) = 13912$

**b. Biaya Terkecil**

	A	B	C	
U	$(32)^{106}$	33	34	0
P	36	42	38	132
N	34	37	40	127
L	16	152	91	

	A	B	C	
U	$(32)^{106}$	33	34	0
P	36	42	38	132
N	$(34)^{16}$	37	40	111
L	0	152	91	

	A	B	C	
U	$(32)^{106}$	33	34	0
P	36	$(42)^{41}$	$(38)^{91}$	0
N	$(34)^{16}$	$(37)^{111}$	40	0
L	0	0	0	

Total biaya:  $(106 \times 32) + (16 \times 34) + (37 \times 111) + (38 \times 91) + (41 \times 42) = 13223$

VAM					
	A	B	C	supply	
U	32	(33) <sup>106</sup>	34	0	1
P	36	42	38	132	2
N	34	37	40	127	3
	122	46	91		
supply	2	(41)	(4)		

	A	B	C	$\bar{S}$	
U	32	(33) <sup>106</sup>	34	0	-
P	36	42	38	132	2
N	34	(37) <sup>46</sup>	40	81	3
	122	0	81		
$\bar{S}$	2	5	2		

	A	B	C	$\bar{S}$	
U	32	(33) <sup>106</sup>	34	0	-
P	36	42	38	132	2
N	(34) <sup>81</sup>	(37) <sup>46</sup>	40	0	6
	41	0	81		
$\bar{S}$	2	-	2		

	A	B	C	$\bar{S}$	$\bar{S}$
U	32	(33) <sup>106</sup>	34	0	-
P	(36) <sup>41</sup>	42	(38) <sup>91</sup>	0	2
N	(34) <sup>81</sup>	(37) <sup>46</sup>	40	0	-
	0	0	80		
$\bar{S}$	36	-	38		

Total biaya:  $(106 \times 33) + (36 \times 41) + (38 \times 91) + (34 \times 0) + (37 \times 46) = 12888$

d. Stepping stone

	A	B	C
U	(32) <sup>106</sup>	33	34
P	(36) <sup>16</sup>	(42) <sup>16</sup>	38
N	34	(37) <sup>36</sup>	(40) <sup>91</sup>

Cost = 13812

$$\begin{aligned} UB &= 33 - 42 + 36 - 32 = -5 \\ UC &= 34 - 40 + 37 - 42 = -7 \\ PC &= 38 - 40 + 37 - 42 = -7 \\ NA &= 34 - 36 + 42 - 37 = 3 \end{aligned}$$

	A	B	C
U	(32) <sup>106</sup>	33	34
P	(36) <sup>16</sup>	(42) <sup>25</sup>	(38) <sup>91</sup>
N	34	(37) <sup>127</sup>	40

Cost =  $13812 - (91 \times 7) = 13175$

$$\begin{aligned} UB &= 33 - 42 + 36 - 32 = -5 \\ UC &= 34 - 38 + 36 - 32 = 0 \\ NA &= 34 - 37 + 42 - 36 = 3 \\ NC &= 40 - 38 + 42 - 37 = 7 \end{aligned}$$

	A	B	C
U	(32) <sup>81</sup>	(33) <sup>25</sup>	34
P	(36) <sup>41</sup>	42	(38) <sup>91</sup>
N	34	(37) <sup>127</sup>	40

Cost =  $13175 - (25 \times 5) = 13050$

$$\begin{aligned} UC &= 34 - 38 + 36 - 32 = 0 \\ PB &= 42 - 36 + 32 - 33 = 5 \\ NA &= 34 - 32 + 33 - 37 = -2 \\ NC &= 40 - 37 + 33 - 32 + 36 - 30 = 2 \end{aligned}$$

	A	B	C
U	32	(33) <sup>106</sup>	34
P	(36) <sup>41</sup>	42	(38) <sup>91</sup>
N	(34) <sup>81</sup>	(37) <sup>46</sup>	40

Cost =  $13050 - (81 \times 2) = 12880$

$$\begin{aligned} UA &= 32 - 33 + 42 - 36 = 2 \\ UC &= 34 - 38 + 36 - 34 + 37 - 33 = 1 \\ PB &= 42 - 37 + 34 - 36 = 3 \\ NC &= 40 - 34 + 36 - 38 = 4 \end{aligned}$$