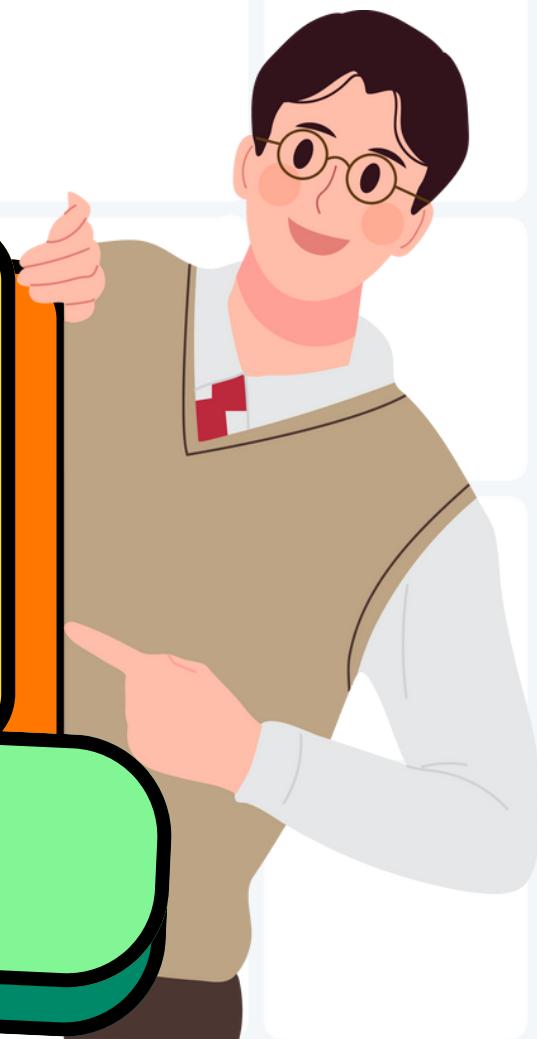


DEA REGINA

IMPLEMENTASI SIMPLE ADDITIVE WEIGHTING
MEMILIH MOBIL LISTRIK DENGAN FITUR DAN HARGA
TERBAIK

NAUFAL RAFID M.F



METODE SAW (SIMPLE ADDITIVE WEIGHTING) DALAM MEMBELI MOBIL

01

C1

Harga mobil



02

C2

Jarak tempuh



03

C3

Fitur (Airbag, Anti Lock Braking System, Hill-Start Assist Control, Sensor parkir, 360° kamera)

04

C4

Waktu isi daya



TUJUAN : MEMBANTU MENENTUKAN MOBIL TERBAIK DARI KANDIDAT YANG TERSEDIA DI PASARAN, DIMANA PRODUK YANG BEREDAR SANGAT KOMPETITIF SEHINGGA SULIT UNTUK DIPILIH.



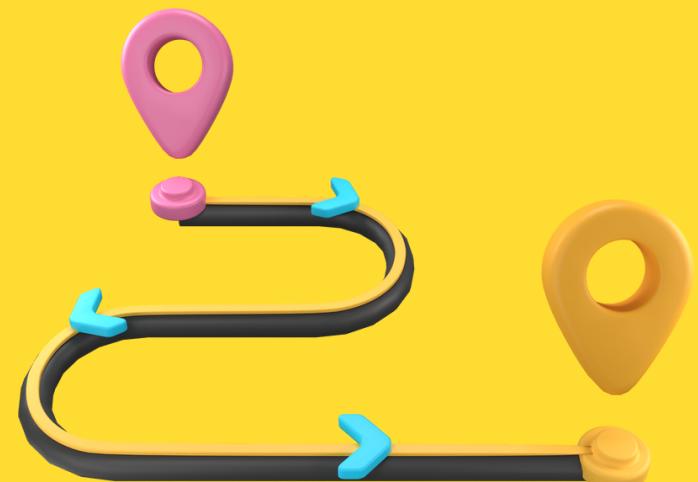
HARGA MOBIL

SEMAKIN MURAH SEMAKIN BAIK (COST)

Harga	Nilai
< 500.000.000	1
500.000.000 < x < 1.000.000.000	2
1.000.000.000 < x < 2.000.000.000	3
2.000.000.000 < x < 3.000.000.000	4
>3.000.000.000	5

JARAK TEMPUSH

SEMAKIN JAUH JARAK TEMPUSH SEMAKIN BAIK (BENEFIT)



Jarak tempuh	Nilai
< 200 Km	1
200 < x < 400 Km	2
400 < x < 600 Km	3
600 < x < 800 Km	4
> 800 Km	5

FITUR : AIRBAG, ANTI LOCK BRAKING SYSTEM, HILL-START ASSIST CONTROL, SENSOR PARKIR, 360° KAMERA

MAKIN BANYAK FITUR SEMAKIN BAIK (BENEFIT)

Fitur yang dimiliki

Nilai

1 fitur

1

2 fitur

2

3 fitur

3

4 fitur

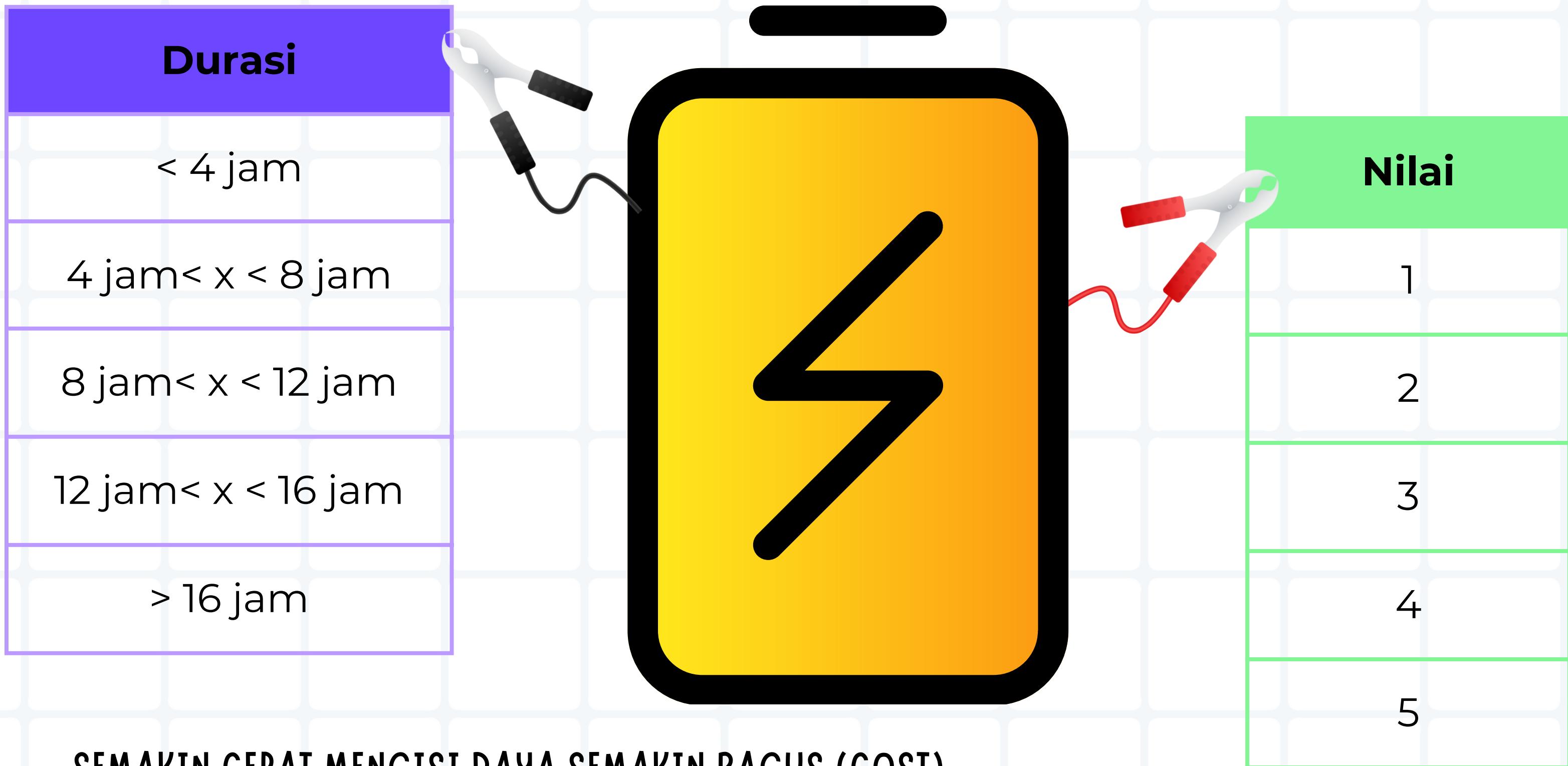
4

5 fitur

5



WAKTU ISI DAYA



ALTERNATIF

A1



HYUNDAI
IONIQ 5

A2



WULING AIR EV

A3



BYD SEAL

A4



BMW iX

A5



MERCEDES-BENZ
EQB

VARIABEL ALTERNATIF

Alternatif	Kriteria			
	C1	C2	C3	C4
A1	Rp. 895.000.000	451 km	Airbag, Anti Lock Braking System, Hill-Start Assist Control, Sensor parkir, 360° kamera	4 jam 59 menit
A2	Rp. 299.500.000	300 km	Airbag, Anti Lock Braking System, Sensor parkir	8 jam 30 menit
A3	Rp. 719.000.000	580 km	Airbag, Anti Lock Braking System, Hill-Start Assist Control, Sensor parkir, 360° kamera	15 jam 12 menit
A4	Rp. 2.627.000.000	600 km	Airbag, Anti Lock Braking System, Hill-Start Assist Control, Sensor parkir, 360° kamera	10 jam 45 menit
A5	Rp. 1.685.000.000	448 km	Airbag, Anti Lock Braking System, Hill-Start Assist Control, Sensor parkir	7 jam

VARIABEL ALTERNATIF

Alternatif	Kriteria			
	C1 (Cost)	C2 (Benefit)	C3 (Benefit)	C4 (Cost)
A1	2	3	5	2
A2	1	2	3	3
A3	2	3	5	4
A4	4	4	5	3
A5	3	3	4	2

MATRIKS KEPUTUSAN

X =

$$\begin{bmatrix} 2 & 3 & 5 & 2 \\ 1 & 2 & 3 & 3 \\ 2 & 3 & 5 & 4 \\ 4 & 4 & 5 & 3 \\ 3 & 3 & 4 & 2 \end{bmatrix}$$

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RUMUS NORMALISASI MATRIKS

$$R_{ij} = \begin{cases} \frac{X_{ij}}{\text{Max } X_{ij}} & \rightarrow \text{Jika } j \text{ adalah attribute keuntungan (benefit)} \\ \frac{\text{Min } X_{ij}}{X_{ij}} & \rightarrow \text{Jika } j \text{ adalah attribute biaya (cost)} \end{cases}$$

VARIABEL ALTERNATIF

Alternatif	Kriteria			
	C1 (Cost)	C2 (Benefit)	C3 (Benefit)	C4 (Cost)
A1	$1/2 = 0.5$	$3/4 = 0.75$	$5/5 = 1$	$2/2 = 1$
A2	$1/1 = 1$	$2/4 = 0.5$	$3/5 = 0.6$	$2/3 = 0.67$
A3	$1/2 = 0.5$	$3/4 = 0.75$	$5/5 = 1$	$2/4 = 0.5$
A4	$1/4 = 0.25$	$4/4 = 1$	$5/5 = 1$	$2/3 = 0.67$
A5	$1/3 = 0.33$	$3/4 = 0.75$	$4/5 = 0.8$	$2/2 = 1$

MATRIKS KEPUTUSAN

X =

$$\begin{bmatrix} 0.5 & 0.75 & 1 & 1 \\ 1 & 0.5 & 0.6 & 0.67 \\ 0.5 & 0.75 & 1 & 0.5 \\ 0.25 & 1 & 1 & 0.67 \\ 0.33 & 0.75 & 0.8 & 1 \end{bmatrix}$$

Q

BOBOT KRITERIA

Kriteria	Bobot
C1	30
C2	20
C3	25
C4	25
Total	100

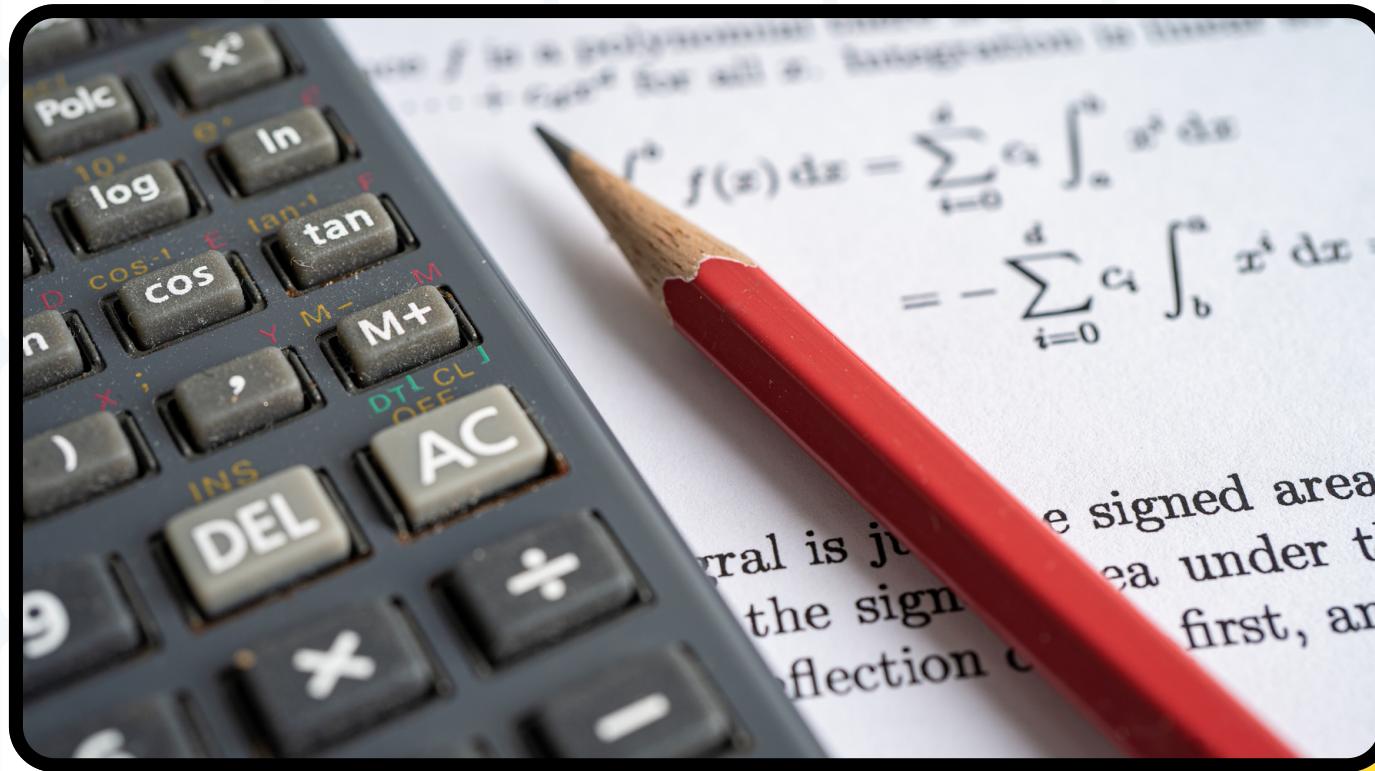


MATRIKS KEPUTUSAN

X =

$$\begin{bmatrix} 0.5 * 0.3 + 0.75 * 0.2 + 1 * 0.25 & 0.5 * 0.25 \\ 1 * 0.3 + 0.5 * 0.2 + 0.6 * 0.25 + 0.67 * 0.25 & \\ 0.5 * 0.3 + 0.75 * 0.2 + 1 * 0.25 & 0.5 * 0.25 \\ 0.25 * 0.3 + 1 * 0.2 + 1 * 0.25 + 0.67 * 0.25 & \\ 0.33 * 0.3 + 0.75 * 0.2 + 0.8 * 0.25 + 1 * 0.25 & \end{bmatrix}$$

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KESIMPULAN

Alternatif	Nilai	Keterangan
(A1) Hyundai IONIQ 5	0.8	Rekomendasi
(A2) Wuling Air ev	0.72	
(A3) BYD Seal	0.68	
(A4) BMW iX	0.69	
(A5) Mercedes-Benz EQB	0.7	

MAKA HYUNDAI IONIQ 5 ADALAH PILIHAN TERBAIK BERDASARKAN KRITERIA YANG DITENTUKAN