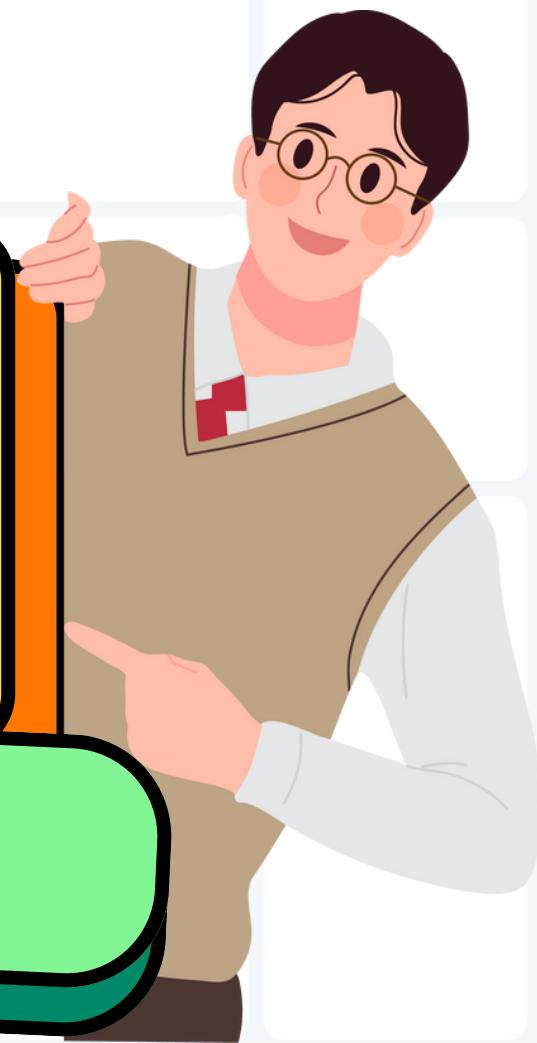


DEA REIGINA

# TUGAS 1 SAW

NAUFAL RAFID M.F



# PENDUKUNG KEPUTUSAN DENGAN 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



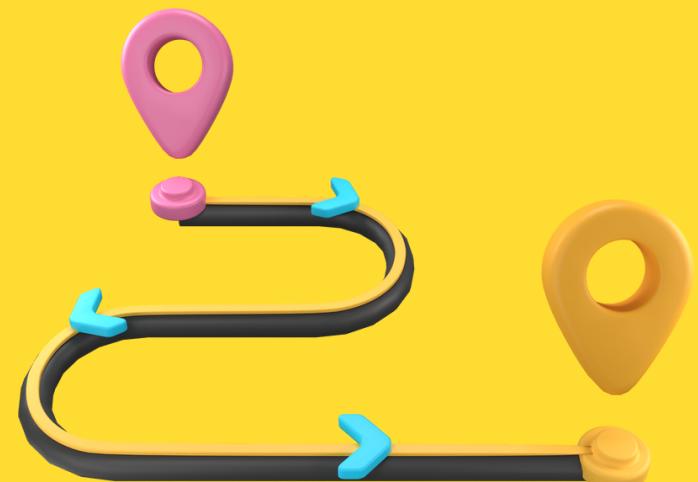
# HARGA MOBIL

SEMAKIN MURAH SEMAKIN BAIK (COST)

Harga	Nilai
< 500.000.000	1
< 1.000.000.000	2
< 2.000.000.000	3
< 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
< 400 Km	2
< 600 Km	3
< 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

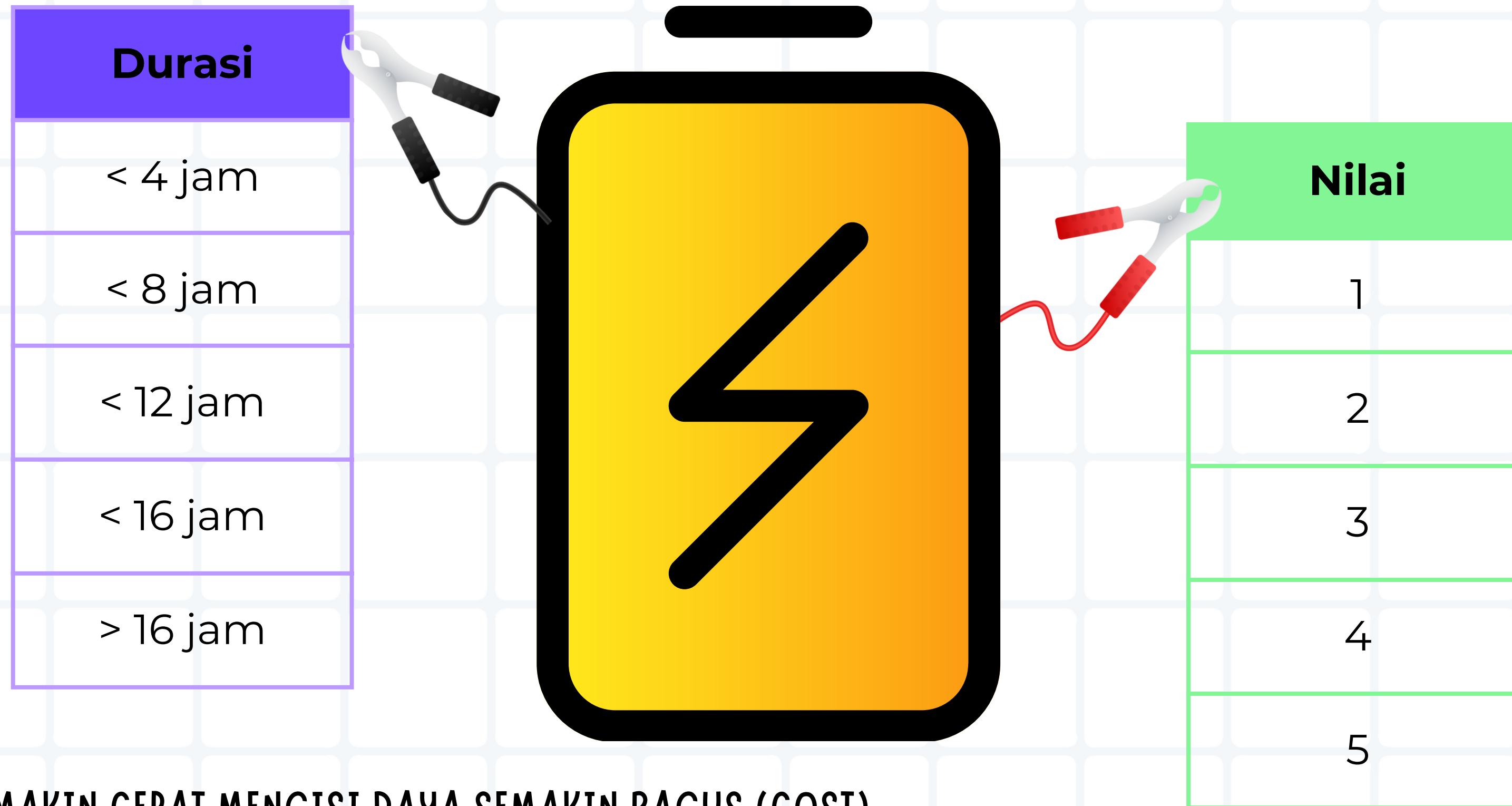
4

5 fitur

5



# WAKTU ISI DAYA



SEMAKIN CEPAT MENGISI DAYA SEMAKIN BAGUS (COST)

# 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

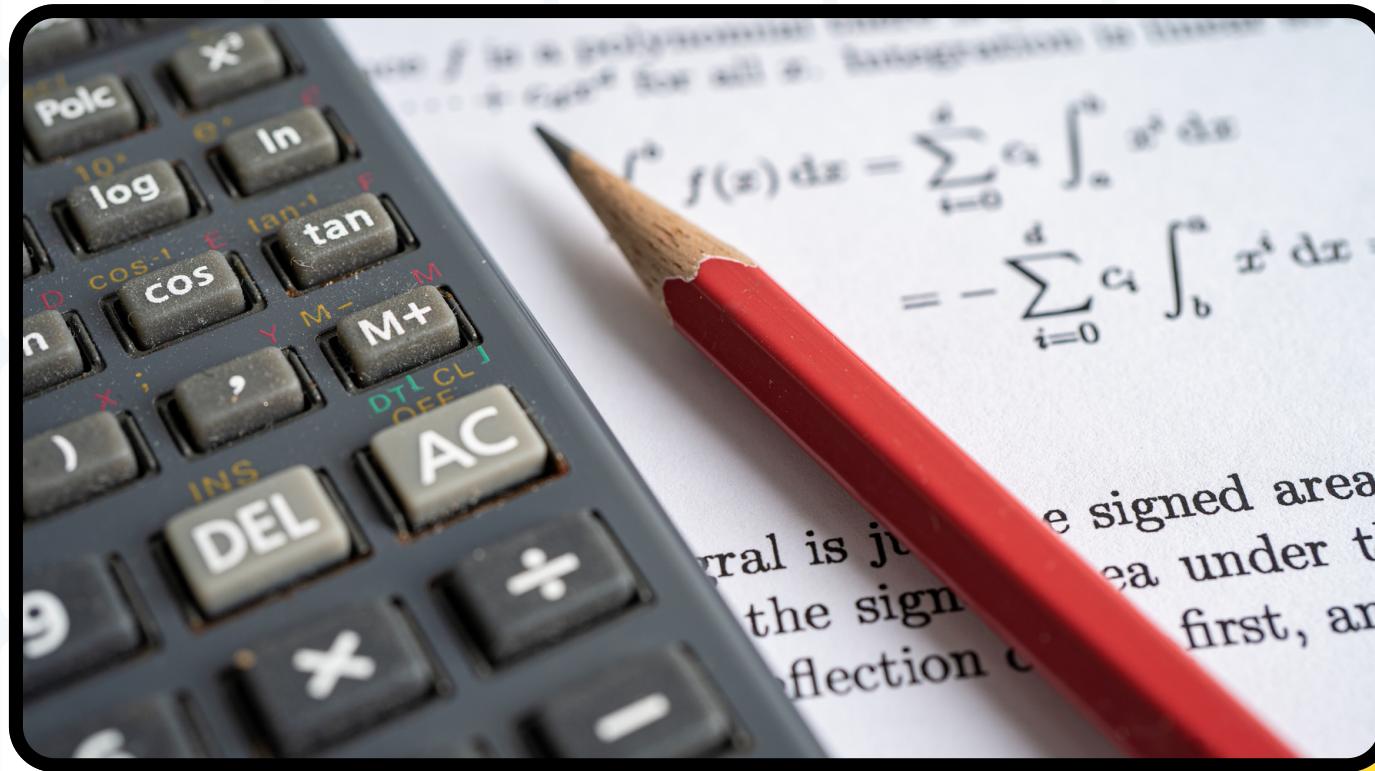


# MATRIKS KEPUTUSAN

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