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Perhitungan EOQ (*Economic Order
Quantity*)

LAMPIRAN 2

Perhitungan SS (*Safety Stock*)

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Logika *Distribution Requirement Planning*
(DRP) November 2013- Oktober 2015

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November 2015- Oktober 2016

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Logika *Distribution Requirement Planning*
(DRP) November 2015- Oktober 2016

1. Data Perhitungan EOQ pada *Dealer ACE Hardware*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\boldsymbol{\sigma} = 18.946148$$

$$\mathbf{SS} = \mathbf{Za} \times \boldsymbol{\sigma}$$

$$= 1.28 \times 18.946148$$

$$= \mathbf{24.251} \approx \mathbf{24 Pcs}$$

2. Data Perhitungan EOQ pada *Dealer Citra*

$$\mathbf{Rm} = 536.5$$

$$\mathbf{C} = \text{Rp } 4.210.000,-$$

$$\mathbf{H} = \text{Rp } 3.780,-$$

$$\begin{aligned} \mathbf{EOQ} &= \sqrt{\frac{2 \times \mathbf{Rm} \times \mathbf{c}}{\mathbf{H}}} \\ &= \sqrt{\frac{2 \times 536.5 \times \text{Rp } 4.210.000}{\text{Rp } 3.780}} \\ &= 1093.188 \approx 1093 \approx \mathbf{1092 Pcs} \end{aligned}$$

3. Data Perhitungan EOQ pada *Dealer Depo Bangunan*

$$\mathbf{Rm} = 643$$

$$\mathbf{C} = \text{Rp } 5.210.000,-$$

$$\mathbf{H} = \text{Rp } 3.780,-$$

$$\begin{aligned}
 \text{EOQ} &= \sqrt{\frac{2 \times Rm \times c}{H}} \\
 &= \sqrt{\frac{2 \times 643 \times Rp\ 5.210.000}{Rp\ 3.780}} \\
 &= 1331.354 \approx 1331 \approx \mathbf{1320\ Pcs}
 \end{aligned}$$

4. Data Perhitungan EOQ pada *Dealer* Mitra 10

$$\begin{aligned}
 Rm &= 2447.75 \\
 C &= Rp\ 19.060.000,- \\
 H &= Rp\ 3.780,-
 \end{aligned}$$

$$\begin{aligned}
 \text{EOQ} &= \sqrt{\frac{2 \times Rm \times c}{H}} \\
 &= \sqrt{\frac{2 \times 2447.75 \times Rp\ 19.060.000}{Rp\ 3.780}} \\
 &= 4968.372 \approx \mathbf{4968\ Pcs}
 \end{aligned}$$

5. Data Perhitungan EOQ pada *Dealer* Rumahku

$$\begin{aligned}
 Rm &= 612 \\
 C &= Rp\ 4.780.000,- \\
 H &= Rp\ 3.780,-
 \end{aligned}$$

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2 \times Rm \times c}{H}} \\ &= \sqrt{\frac{2 \times 612 \times Rp \ 14.780.000}{Rp \ 3.780}} \\ &= 1244.110 \approx 1244 \approx \mathbf{1236 \ Pcs} \end{aligned}$$

1. Data Perhitungan *Safety Stock* pada *Dealer ACE Hardware*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\mathbf{\sigma} = 18.946148$$

$$\mathbf{SS} = \mathbf{Za} \times \mathbf{\sigma}$$

$$= 1.28 \times 18.946148$$

$$= \mathbf{24.251} \approx \mathbf{24 Pcs}$$

2. Data Perhitungan *Safety Stock* pada *Dealer Citra*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\mathbf{\sigma} = 10.894753$$

$$\mathbf{SS} = \mathbf{Za} \times \mathbf{\sigma}$$

$$= 1.28 \times 10.894753$$

$$= \mathbf{13.95} \approx \mathbf{14 Pcs}$$

3. Data Perhitungan *Safety Stock* pada *Dealer Depo Bangunan*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\mathbf{\sigma} = 12.215457$$

$$\mathbf{SS} = \mathbf{Za} \times \mathbf{\sigma}$$

$$= 1.28 \times 12.215457$$

$$= \mathbf{15.64} \approx \mathbf{16 Pcs}$$

4. Data Perhitungan *Safety Stock* pada *Dealer Mitra 10*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\boldsymbol{\sigma} = 43.850785$$

$$\begin{aligned}\mathbf{SS} &= \mathbf{Za} \times \boldsymbol{\sigma} \\ &= 1.28 \times 43.850785 \\ &= \mathbf{56.13 \approx 56 Pcs}\end{aligned}$$

5. Data Perhitungan *Safety Stock* pada *Dealer Rumahku*

$$\mathbf{Za} = 90\% \approx 1.28$$

$$\boldsymbol{\sigma} = 12.258094$$

$$\begin{aligned}\mathbf{SS} &= \mathbf{Za} \times \boldsymbol{\sigma} \\ &= 1.28 \times 12.258094 \\ &= \mathbf{15.69 \approx 16 Pcs}\end{aligned}$$

Logika Distribution Requirement Planning Dealer ACE Hardware Periode Bulan November 2013-Oktober 2015

Dealer ACE Hardware																										
Kebijakan Pemesanan : DRP/EOQ																		Safety Stock : 24 Pcs								
Lead Time : 3 Bulan																		EOQ : 3168 Pcs								
Ket.	Periode																								Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
GR		1572	1572	1560	1560	1584	1596	1560	1572	1620	1608	1584	1572	1572	1572	1560	1560	1584	1596	1560	1572	1620	1608	1584		37920pcs
SR		3168		3168																						
POH		1596	24	1632	72	1656	60	1668	96	1644	36	1620	48	1644	72	1668	108	1716	132	1704	144	1740	120	1680	96	20976 pcs
NR		1572		1536		1512		1500		1524		1548		1524		1500		1452		1464		1428		1488		18048
Po Rec		3168		3168		3168		3168		3168		3168		3168		3168		3168		3168		3168		3168		12 kali
Po Rel			3168		3168		3168		3168		3168		3168		3168		3168		3168		3168		3168		3168	

Biaya distribusi produk CW 421 J untuk dealer ACE Hardware dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 12 x Rp 12.060.000,-
 = Rp 144.720.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 20976 x Rp 3.780,-
 = Rp 79.289.280,-

Total Biaya Distribusi = Rp 144.720.000,- + Rp 79.289.280,-
 = **Rp 224.009.280,-**

Logika Distribution Requirement Planning Dealer Citra Periode Bulan November 2013-Oktober 2015

Dealer Citra																											
Kebijakan Pemesanan : DRP/EOQ																		Safety Stock : 14 Pcs									
Lead Time : 3 Bulan																		EOQ : 1092 Pcs									
Ket.	Periode																								Jumlah		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
GR		552	540	540	528	528	552	552	540	528	528	540	540	552	540	528	516	528	528	516	540	540	552	528	540	12876pcs	
SR		1092	1092																								
POH		540	1092	552	24	588	36	576	36	600	72	624	84	624	84	648	132	696	168	744	204	756	204	768	228	10080 pcs	
NR		552				504		516		492		468		468		444		396		348		336		324		4848pcs	
Po Rec		1092	1092			1092		1092		1092		1092		1092		1092		1092		1092		1092		1092		1092	12 kali
Po Rel			1092		1092		1092		1092		1092		1092		1092		1092		1092		1092		1092		1092		

Biaya distribusi produk CW 421 J untuk dealer Citra dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 12 x Rp 4.210.000,-
 = Rp 50.520.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 10080 x Rp 3.780,-
 = Rp 38,102,400,-

Total Biaya Distribusi = Rp 50.520.000,- + Rp 38,102,400,-
 = **Rp 88.622.400,-**

Logika *Distribution Requirement Planning Dealer* Depo Bangunan Periode Bulan November 2013-Oktober 2015

Dealer Depo Bangunan																										
Kebijakan Pemesanan : DRP/EOQ																		Safety Stock : 16 Pcs								
Lead Time : 3 Bulan																		EOQ : 1320 Pcs								
Ket.	Periode																								Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
GR		648	660	648	636	648	624	648	636	636	624	648	660	648	648	624	636	648	624	648	660	660	648	648	624	15432pcs
SR		1320		1320																						
POH		672	12	684	48	720	96	768	132	816	192	864	204	876	228	924	288	960	336	1008	348	1008	360	1032	408	12984pcs
NR		648		636		600		552		504		456		444		396		360		312		312		288		5508pcs
Po Rec		1320		1320		1320		1320		1320		1320		1320		1320		1320		1320		1320		1320		12 kali
Po Rel			1320		1320		1320		1320		1320		1320		1320		1320		1320		1320		1320			

Biaya distribusi produk CW 421 J untuk *dealer* Depo Bangunan dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 12 x Rp 5,210,000 ,-
 = Rp 62.520.000 ,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 12984 x Rp 3.780,-
 = Rp 49.079.520,-

Total Biaya Distribusi = Rp 62.520.000,- + Rp 49.079.520,-
 = **Rp 111.599.520,-**

Logika *Distribution Requirement Planning Dealer* Mitra 10 Periode Bulan November 2013-Oktober 2015

Dealer Mitra 10																										
Kebijakan Pemesanan : DRP/EOQ																		Safety Stock : 56 Pcs								
Lead Time : 3 Bulan																		EOQ : 4968 Pcs								
Ket.	Periode																								Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
GR		2488	2412	2448	2448	2424	2352	2400	2448	2448	2496	2472	2378	2400	2424	2448	2496	2496	2532	2400	2448	2448	2496	2448	2496	58746Pcs
SR		4968		4968																						
POH		2480	68	2588	140	2684	332	2900	452	2972	476	2972	594	3162	738	3258	762	3234	702	3270	822	3342	846	3366	870	43030pcs
NR		2488		2380		2284		2068		1996		1996		1806		1710		1734		1698		1626		1602		23388pcs
Po Rec		4968		4968		4968		4968		4968		4968		4968		4968		4968		4968		4968		4968		12 kali
Po Rel			4968		4968		4968		4968		4968		4968		4968		4968		4968		4968		4968		4968	

Biaya distribusi produk CW 421 J untuk *dealer* Mitra 10 dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 12 x Rp 19.060.000,-
 = Rp 228.720.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 43030 x Rp 3.780,-
 = Rp 162.653.400,-

Total Biaya Distribusi = Rp 228.720.000,-+ Rp 162.653.400,-
 = **Rp 391.373.400,-**

Logika *Distribution Requirement Planning Dealer* Rumahku Periode Bulan November 2013-Oktober 2015

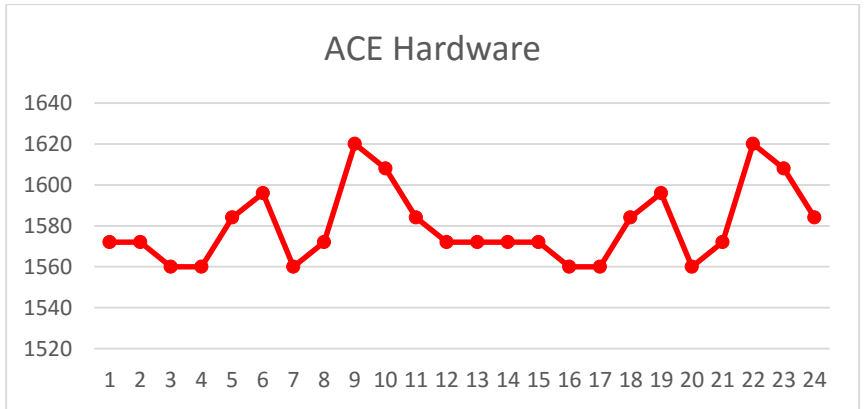
Dealer Rumahku																										
Kebijakan Pemesanan : DRP/EOQ																		Safety Stock : 16 Pcs								
Lead Time : 3 Bulan																		EOQ : 1236 Pcs								
Ket.	Periode																								Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
GR		624	600	612	612	624	588	600	612	612	624	600	588	600	612	612	624	624	636	600	612	612	624	612	624	14688pcs
SR		1236		1236																						
POH		612	12	636	24	636	48	684	72	696	72	708	120	756	144	768	144	756	120	756	144	768	144	768	144	9732pcs
NR		624		600		600		552		540		528		480		468		480		480		468		468		6288p
Po Rec		1236		1236		1236		1236		1236		1236		1236		1236		1236		1236		1236		1236		12 kali
Po Rel			1236		1236		1236		1236		1236		1236		1236		1236		1236		1236					

Biaya distribusi produk CW 421 J untuk *dealer* Rumahku dengan menggunakan metode DRP yaitu.

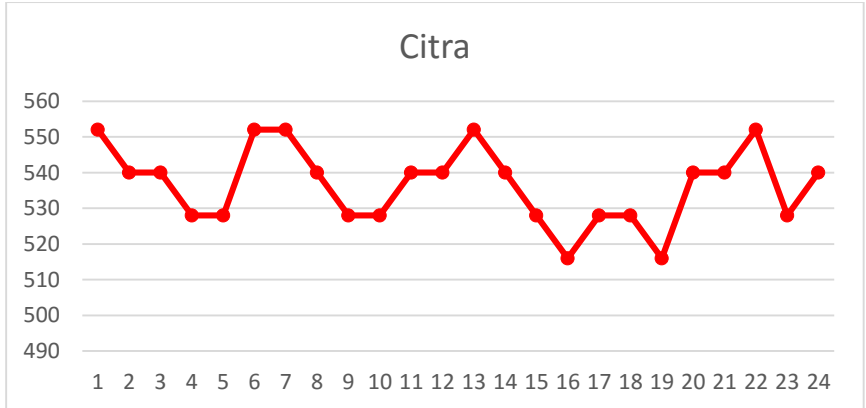
Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 12 x Rp 4.780.000,-
 = Rp 57.360.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 9732 x Rp 3.780,-
 = Rp 36.786.960,-

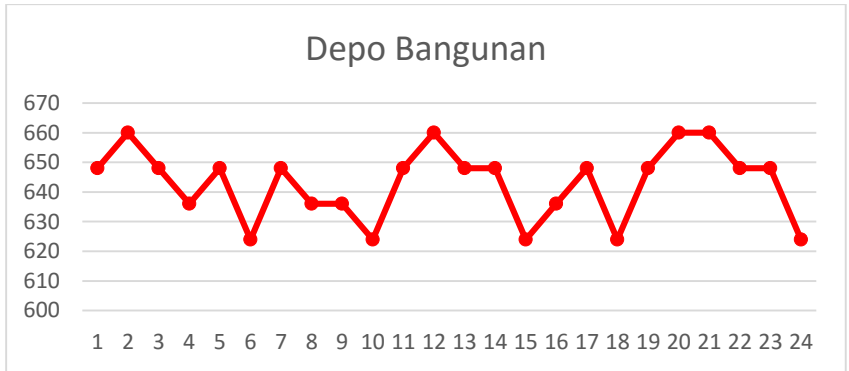
Total Biaya Distribusi = Rp 57.360.000,- + Rp 36.786.960,-
 = **Rp 94.146.960,-**



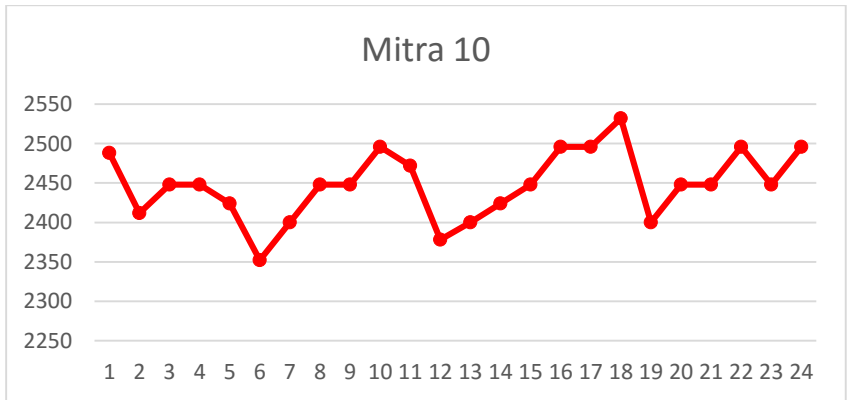
Grafik Permintaan *Dealer* ACE Hardware



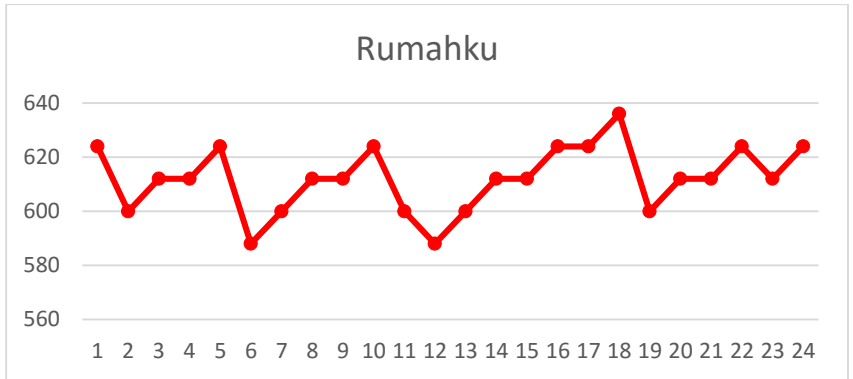
Grafik Permintaan *Dealer* Citra



Grafik Permintaan Dealer Depo Bangunan



Grafik Permintaan Dealer Mitra 10



Grafik Permintaan *Dealer* Rumahku

1. Dealer ACE Hardware

- Moving Average N = 3

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	1572	1604
2	Desember	1572	1588
3	Januari	1560	1576
4	Februari	1560	1568
5	Maret	1584	1564
6	April	1596	1568
7	Mei	1560	1580
8	Juni	1572	1580
9	Juli	1620	1576
10	Agustus	1608	1584
11	September	1584	1600
12	Oktober	1572	1604
13	November	1572	1588
14	Desember	1572	1576
15	Januari	1572	1572
16	Februari	1560	1572
17	Maret	1560	1568
18	April	1584	1564
19	Mei	1596	1568
20	Juni	1560	1580
21	Juli	1572	1580
22	Agustus	1620	1576
23	September	1608	1584
24	Oktober	1584	1600
Jumlah		37920	37920

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	1572	1596
2	Desember	1572	1596
3	Januari	1560	1584
4	Februari	1560	1572
5	Maret	1584	1566
6	April	1596	1569
7	Mei	1560	1575
8	Juni	1572	1575
9	Juli	1620	1578
10	Agustus	1608	1587
11	September	1584	1590
12	Oktober	1572	1596
13	November	1572	1596
14	Desember	1572	1584
15	Januari	1572	1575
16	Februari	1560	1572
17	Maret	1560	1569
18	April	1584	1566
19	Mei	1596	1569
20	Juni	1560	1575
21	Juli	1572	1575
22	Agustus	1620	1578
23	September	1608	1587
24	Oktober	1584	1590
Jumlah		37920	37920

- Single Exponential Smooting $\alpha = 0.1$

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	1572	1574
2	Desember	1572	1573.8
3	Januari	1560	1573.62
4	Februari	1560	1572.258
5	Maret	1584	1571.032
6	April	1596	1572.329
7	Mei	1560	1574.696
8	Juni	1572	1573.226
9	Juli	1620	1574.696
10	Agustus	1608	1577.793
11	September	1584	1580.814
12	Oktober	1572	1581.133
13	November	1572	1580.219
14	Desember	1572	1579.397
15	Januari	1572	1578.658
16	Februari	1560	1577.992
17	Maret	1560	1576.193
18	April	1584	1574.573
19	Mei	1596	1575.516
20	Juni	1560	1577.565
21	Juli	1572	1575.808
22	Agustus	1620	1575.427
23	September	1608	1579.885
24	Oktober	1584	1582.696
Jumlah		37920	37831.74

2. Dealer Citra

- Moving Average $N = 3$

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	552	536
2	Desember	540	540
3	Januari	540	540
4	Februari	528	544
5	Maret	528	536
6	April	552	532
7	Mei	552	536
8	Juni	540	544
9	Juli	528	548
10	Agustus	528	540
11	September	540	532
12	Oktober	540	532
13	November	552	536
14	Desember	540	544
15	Januari	528	544
16	Februari	516	540
17	Maret	528	528
18	April	528	524
19	Mei	516	524
20	Juni	540	524
21	Juli	540	528
22	Agustus	552	532
23	September	528	544
24	Oktober	540	540
Jumlah		12876	12868

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	552	540
2	Desember	540	540
3	Januari	540	540
4	Februari	528	540
5	Maret	528	540
6	April	552	534
7	Mei	552	537
8	Juni	540	540
9	Juli	528	543
10	Agustus	528	543
11	September	540	537
12	Oktober	540	534
13	November	552	534
14	Desember	540	540
15	Januari	528	543
16	Februari	516	540
17	Maret	528	534
18	April	528	528
19	Mei	516	525
20	Juni	540	522
21	Juli	540	528
22	Agustus	552	531
23	September	528	537
24	Oktober	540	540
Jumlah		12876	12870

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	552	540
2	Desember	540	541.2
3	Januari	540	541.08
4	Februari	528	540.972
5	Maret	528	539.6748
6	April	552	538.50732
7	Mei	552	539.85659
8	Juni	540	541.07093
9	Juli	528	540.96384
10	Agustus	528	539.66745
11	September	540	538.50071
12	Oktober	540	538.65064
13	November	552	538.78557
14	Desember	540	540.10702
15	Januari	528	540.09631
16	Februari	516	538.88668
17	Maret	528	536.59801
18	April	528	535.73821
19	Mei	516	534.96439
20	Juni	540	533.06795
21	Juli	540	533.76116
22	Agustus	552	534.38504
23	September	528	536.14654
24	Oktober	540	535.33188
Jumlah		12876	12918.013

3. Dealer Depo Bangunan

- Moving Average N = 3

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	648	648
2	Desember	660	644
3	Januari	648	648
4	Februari	636	652
5	Maret	648	648
6	April	624	644
7	Mei	648	636
8	Juni	636	640
9	Juli	636	636
10	Agustus	624	640
11	September	648	632
12	Oktober	660	636
13	November	648	644
14	Desember	648	652
15	Januari	624	652
16	Februari	636	640
17	Maret	648	636
18	April	624	636
19	Mei	648	636
20	Juni	660	640
21	Juli	660	644
22	Agustus	648	656
23	September	648	656
24	Oktober	624	652
Jumlah		15432	15448

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	648	648
2	Desember	660	648
3	Januari	648	648
4	Februari	636	648
5	Maret	648	648
6	April	624	648
7	Mei	648	639
8	Juni	636	639
9	Juli	636	639
10	Agustus	624	636
11	September	648	636
12	Oktober	660	636
13	November	648	642
14	Desember	648	645
15	Januari	624	651
16	Februari	636	645
17	Maret	648	639
18	April	624	639
19	Mei	648	633
20	Juni	660	639
21	Juli	660	645
22	Agustus	648	648
23	September	648	654
24	Oktober	624	654
Jumlah		15432	15447

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	648	644
2	Desember	660	644.4
3	Januari	648	645.96
4	Februari	636	646.164
5	Maret	648	645.1476
6	April	624	645.43284
7	Mei	648	643.28956
8	Juni	636	643.7606
9	Juli	636	642.98454
10	Agustus	624	642.28609
11	September	648	640.45748
12	Oktober	660	641.21173
13	November	648	643.09056
14	Desember	648	643.5815
15	Januari	624	644.02335
16	Februari	636	642.02102
17	Maret	648	641.41891
18	April	624	642.07702
19	Mei	648	640.26932
20	Juni	660	641.04239
21	Juli	660	642.93815
22	Agustus	648	644.64433
23	September	648	644.9799
24	Oktober	624	645.28191
Jumlah		15432	15440.463

4. Delaer Mitra 10

- Moving Average N = 3

t	Dealer Bulan	Permintaan Aktual	Peramalan
		Xi	Fi
1	November	2488	2436
2	Desember	2412	2461.33
3	Januari	2448	2449.33
4	Februari	2448	2449.33
5	Maret	2424	2436
6	April	2352	2440
7	Mei	2400	2408
8	Juni	2448	2392
9	Juli	2448	2400
10	Agustus	2496	2432
11	September	2472	2464
12	Oktober	2378	2472
13	November	2400	2448.67
14	Desember	2424	2416.67
15	Januari	2448	2400.67
16	Februari	2496	2424
17	Maret	2496	2456
18	April	2532	2480
19	Mei	2400	2508
20	Juni	2448	2476
21	Juli	2448	2460
22	Agustus	2496	2432
23	September	2448	2464
24	Oktober	2496	2464
Jumlah		58746	58670

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	2488	2449
2	Desember	2412	2449
3	Januari	2448	2449
4	Februari	2448	2449
5	Maret	2424	2449
6	April	2352	2433
7	Mei	2400	2418
8	Juni	2448	2406
9	Juli	2448	2406
10	Agustus	2496	2412
11	September	2472	2448
12	Oktober	2378	2466
13	November	2400	2448.5
14	Desember	2424	2436.5
15	Januari	2448	2418.5
16	Februari	2496	2412.5
17	Maret	2496	2442
18	April	2532	2466
19	Mei	2400	2493
20	Juni	2448	2481
21	Juli	2448	2469
22	Agustus	2496	2457
23	September	2448	2448
24	Oktober	2496	2460
Jumlah		58746	58666

- Single Exponential Smoothing $\alpha = 0.1$

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	2488	2428.667
2	Desember	2412	2434.60
3	Januari	2448	2432.34
4	Februari	2448	2433.91
5	Maret	2424	2435.315
6	April	2352	2434.184
7	Mei	2400	2425.965
8	Juni	2448	2423.369
9	Juli	2448	2425.832
10	Agustus	2496	2428.049
11	September	2472	2434.844
12	Oktober	2378	2438.56
13	November	2400	2432.50
14	Desember	2424	2429.25
15	Januari	2448	2428.73
16	Februari	2496	2430.655
17	Maret	2496	2437.19
18	April	2532	2443.071
19	Mei	2400	2451.964
20	Juni	2448	2446.767
21	Juli	2448	2446.891
22	Agustus	2496	2447.001
23	September	2448	2451.901
24	Oktober	2496	2451.511
Jumlah		58746	58473.07

5. Dealer Rumahku

- Moving Average $N = 3$

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	624	608
2	Desember	600	616.00
3	Januari	612	612.00
4	Februari	612	612.00
5	Maret	624	608
6	April	588	616
7	Mei	600	608
8	Juni	612	604
9	Juli	612	600
10	Agustus	624	608
11	September	600	616
12	Oktober	588	612
13	November	600	604.00
14	Desember	612	596.00
15	Januari	612	600.00
16	Februari	624	608
17	Maret	624	616
18	April	636	620
19	Mei	600	628
20	Juni	612	620
21	Juli	612	616
22	Agustus	624	608
23	September	612	616
24	Oktober	624	616
Jumlah		14688	14668

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	624	612
2	Desember	600	612
3	Januari	612	612
4	Februari	612	612
5	Maret	624	612
6	April	588	612
7	Mei	600	609
8	Juni	612	606
9	Juli	612	606
10	Agustus	624	603
11	September	600	612
12	Oktober	588	612
13	November	600	606
14	Desember	612	603
15	Januari	612	600
16	Februari	624	603
17	Maret	624	612
18	April	636	618
19	Mei	600	624
20	Juni	612	621
21	Juli	612	618
22	Agustus	624	615
23	September	612	612
24	Oktober	624	615
Jumlah		14688	14667

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan
	Bulan	Xi	Fi
1	November	624	610
2	Desember	600	611.40
3	Januari	612	610.26
4	Februari	612	610.43
5	Maret	624	610.5906
6	April	588	611.93154
7	Mei	600	609.53839
8	Juni	612	608.58455
9	Juli	612	608.92609
10	Agustus	624	609.23348
11	September	600	610.71014
12	Oktober	588	609.63912
13	November	600	607.48
14	Desember	612	606.73
15	Januari	612	607.25
16	Februari	624	607.72943
17	Maret	624	609.35648
18	April	636	610.82084
19	Mei	600	613.33875
20	Juni	612	612.00488
21	Juli	612	612.00439
22	Agustus	624	612.00395
23	September	612	613.20356
24	Oktober	624	613.0832
Jumlah		14688	14646.251

1. Dealer ACE Hardware

- Moving Average N = 3

t	Dealer Bulan	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
		Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	1572	1604	-32	32	1024	0.02036
2	Desember	1572	1588	-16	16	256	0.01018
3	Januari	1560	1576	-16	16	256	0.01026
4	Februari	1560	1568	-8	8	64	0.00513
5	Maret	1584	1564	20	20	400	0.01263
6	April	1596	1568	28	28	784	0.01754
7	Mei	1560	1580	-20	20	400	0.01282
8	Juni	1572	1580	-8	8	64	0.00509
9	Juli	1620	1576	44	44	1936	0.02716
10	Agustus	1608	1584	24	24	576	0.01493
11	September	1584	1600	-16	16	256	0.01010
12	Oktober	1572	1604	-32	32	1024	0.02036
13	November	1572	1588	-16	16	256	0.01018
14	Desember	1572	1576	-4	4	16	0.00254
15	Januari	1572	1572	0	0	0	0.00000
16	Februari	1560	1572	-12	12	144	0.00769
17	Maret	1560	1568	-8	8	64	0.00513
18	April	1584	1564	20	20	400	0.01263
19	Mei	1596	1568	28	28	784	0.01754
20	Juni	1560	1580	-20	20	400	0.01282
21	Juli	1572	1580	-8	8	64	0.00509
22	Agustus	1620	1576	44	44	1936	0.02716
23	September	1608	1584	24	24	576	0.01493
24	Oktober	1584	1600	-16	16	256	0.01010
Jumlah		37920	37920	0	464	11936	0.29235

- Moving Average N= 4

t	Dealer Bulan	Permintaan Aktual	Peramala n	Error	Abs. Error	Error ²	Abs.E / Xi
		Xi	Fi	Xi-Fi	Xi- Fi	Xi-Fi ²	
1	November	1572	1596	-24	24	576	0.01527
2	Desember	1572	1596	-24	24	576	0.01527
3	Januari	1560	1584	-24	24	576	0.01538
4	Februari	1560	1572	-12	12	144	0.00769
5	Maret	1584	1566	18	18	324	0.01136
6	April	1596	1569	27	27	729	0.01692
7	Mei	1560	1575	-15	15	225	0.00962
8	Juni	1572	1575	-3	3	9	0.00191
9	Juli	1620	1578	42	42	1764	0.02593
10	Agustus	1608	1587	21	21	441	0.01306
11	September	1584	1590	-6	6	36	0.00379
12	Oktober	1572	1596	-24	24	576	0.01527
13	November	1572	1596	-24	24	576	0.01527
14	Desember	1572	1584	-12	12	144	0.00763
15	Januari	1572	1575	-3	3	9	0.00191
16	Februari	1560	1572	-12	12	144	0.00769
17	Maret	1560	1569	-9	9	81	0.00577
18	April	1584	1566	18	18	324	0.01136
19	Mei	1596	1569	27	27	729	0.01692
20	Juni	1560	1575	-15	15	225	0.00962
21	Juli	1572	1575	-3	3	9	0.00191
22	Agustus	1620	1578	42	42	1764	0.02593
23	September	1608	1587	21	21	441	0.01306
24	Oktober	1584	1590	-6	6	36	0.00379
Jumlah		37920	37920	0	432	10458	0.27230

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer Bulan	Permintaan Aktual	Peramala n	Error	Abs. Error	Error ²	Abs.E / Xi
		Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	1572	1574	-2	2	4	0.00127
2	Desember	1572	1573.8	-1.8	1.8	3.24	0.00115
3	Januari	1560	1573.62	-13.62	13.62	185.5	0.00873
4	Februari	1560	1572.258	-12.25	12.258	150.2	0.00786
5	Maret	1584	1571.032	12.967	12.967	168.1	0.00819
6	April	1596	1572.329	23.671	23.671	560.3	0.01483
7	Mei	1560	1574.696	-14.69	14.696	215.9	0.00942
8	Juni	1572	1573.226	-1.226	1.2264	1.504	0.00078
9	Juli	1620	1574.696	46.896	46.896	2199	0.02895
10	Agustus	1608	1577.793	30.206	30.206	912.4	0.01879
11	September	1584	1580.814	3.1859	3.1859	10.14	0.00201
12	Oktober	1572	1581.133	-9.132	9.1326	83.40	0.00581
13	November	1572	1580.219	-8.219	8.2194	67.55	0.00523
14	Desember	1572	1579.397	-7.397	7.3974	54.72	0.00471
15	Januari	1572	1578.658	-6.657	6.6577	44.32	0.00424
16	Februari	1560	1577.992	-17.99	17.991	323.7	0.01153
17	Maret	1560	1576.193	-16.19	16.192	262.2	0.01038
18	April	1584	1574.573	9.4265	9.4265	88.85	0.00595
19	Mei	1596	1575.516	20.483	20.483	419.5	0.01283
20	Juni	1560	1577.565	-17.56	17.564	308.5	0.01126
21	Juli	1572	1575.808	-3.808	3.8080	14.50	0.00242
22	Agustus	1620	1575.427	44.572	44.572	1986	0.02751
23	September	1608	1579.885	28.115	28.115	790.4	0.01748
24	Oktober	1584	1582.696	1.3039	1.3039	1.700	0.00082
Jumlah		37920	37831.74	88.264	353.39	8857	0.22215

Perhitungan Error Dealer ACE Hardware

- Moving Average N = 3

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{0}{24} \\ &= 0\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{464}{24} \\ &= 19.333\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{11936}{24} \\ &= 497.333\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.292 \\ &= 1.218\end{aligned}$$

- Moving Average N = 4

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{0}{24} \\ &= 0\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{432}{24} \\ &= 18\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{10458}{24} \\ &= 435.750\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.272 \\ &= 1.135\end{aligned}$$

- **Single Exponential Smoothing $\alpha = 0.1$**

$$\begin{aligned}\mathbf{ME} &= \frac{\Sigma \mathit{Error}}{n} \\ &= \frac{88.2675}{24} \\ &= 4\end{aligned}$$

$$\begin{aligned}\mathbf{MAD} &= \frac{\Sigma \mathit{Abs. Error}}{n} \\ &= \frac{353.264}{24} \\ &= 14.725\end{aligned}$$

$$\begin{aligned}\mathbf{MSE} &= \frac{\Sigma \mathit{Error}^2}{n} \\ &= \frac{8857.099}{24} \\ &= 369.046\end{aligned}$$

$$\begin{aligned}\mathbf{MAPE} &= \frac{100}{n} \times \Sigma \frac{\mathit{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.222 \\ &= 0.926\end{aligned}$$

2. Dealer Citra

- Moving Average N = 3

t	Dealer Bulan	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
		Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	552	536	16	16	256	0.02899
2	Desember	540	540	0	0	0	0.00000
3	Januari	540	540	0	0	0	0.00000
4	Februari	528	544	-16	16	256	0.03030
5	Maret	528	536	-8	8	64	0.01515
6	April	552	532	20	20	400	0.03623
7	Mei	552	536	16	16	256	0.02899
8	Juni	540	544	-4	4	16	0.00741
9	Juli	528	548	-20	20	400	0.03788
10	Agustus	528	540	-12	12	144	0.02273
11	September	540	532	8	8	64	0.01481
12	Oktober	540	532	8	8	64	0.01481
13	November	552	536	16	16	256	0.02899
14	Desember	540	544	-4	4	16	0.00741
15	Januari	528	544	-16	16	256	0.03030
16	Februari	516	540	-24	24	576	0.04651
17	Maret	528	528	0	0	0	0.00000
18	April	528	524	4	4	16	0.00758
19	Mei	516	524	-8	8	64	0.01550
20	Juni	540	524	16	16	256	0.02963
21	Juli	540	528	12	12	144	0.02222
22	Agustus	552	532	20	20	400	0.03623
23	September	528	544	-16	16	256	0.03030
24	Oktober	540	540	0	0	0	0.00000
Jumlah		12876	12868	8	264	4160	0.4919

• **Moving Average N= 4**

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	552	540	12	12	144	0.02174
2	Desember	540	540	0	0	0	0.00000
3	Januari	540	540	0	0	0	0.00000
4	Februari	528	540	-12	12	144	0.02273
5	Maret	528	540	-12	12	144	0.02273
6	April	552	534	18	18	324	0.03261
7	Mei	552	537	15	15	225	0.02717
8	Juni	540	540	0	0	0	0.00000
9	Juli	528	543	-15	15	225	0.02841
10	Agustus	528	543	-15	15	225	0.02841
11	September	540	537	3	3	9	0.00556
12	Oktober	540	534	6	6	36	0.01111
13	November	552	534	18	18	324	0.03261
14	Desember	540	540	0	0	0	0.00000
15	Januari	528	543	-15	15	225	0.02841
16	Februari	516	540	-24	24	576	0.04651
17	Maret	528	534	-6	6	36	0.01136
18	April	528	528	0	0	0	0.00000
19	Mei	516	525	-9	9	81	0.01744
20	Juni	540	522	18	18	324	0.03333
21	Juli	540	528	12	12	144	0.02222
22	Agustus	552	531	21	21	441	0.03804
23	September	528	537	-9	9	81	0.01705
24	Oktober	540	540	0	0	0	0.00000
Jumlah		12876	12870	6	240	3708	0.44744

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	552	540	12	12	144	0.02174
2	Desember	540	541.2	-1.2	1.2	1.44	0.00222
3	Januari	540	541.08	-1.08	1.08	1.166	0.00200
4	Februari	528	540.972	-12.97	12.972	168.2	0.02457
5	Maret	528	539.6748	-11.67	11.6748	136.3	0.02211
6	April	552	538.5073	13.492	13.4926	182	0.02444
7	Mei	552	539.8565	12.143	12.1434	147	0.02200
8	Juni	540	541.0709	-1.070	1.07092	1.146	0.00198
9	Juli	528	540.9638	-12.96	12.9638	168	0.02455
10	Agustus	528	539.6674	-11.66	11.6674	136	0.02210
11	September	540	538.5007	1.499	1.49929	2.247	0.00278
12	Oktober	540	538.6506	1.3493	1.34936	1.820	0.00250
13	November	552	538.7855	13.214	13.2144	174.6	0.02394
14	Desember	540	540.1070	-0.107	0.10701	0.011	0.00020
15	Januari	528	540.0963	-12.09	12.0963	146.3	0.02291
16	Februari	516	538.8866	-22.88	22.8866	523.8	0.04435
17	Maret	528	536.5980	-8.598	8.59801	73.92	0.01628
18	April	528	535.7382	-7.738	7.73821	59.87	0.01466
19	Mei	516	534.9643	-18.96	18.9643	359.6	0.03675
20	Juni	540	533.0679	6.932	6.93204	48.05	0.01284
21	Juli	540	533.7611	6.238	6.23884	38.92	0.01155
22	Agustus	552	534.3850	17.614	17.6149	310.2	0.03191
23	September	528	536.1465	-8.146	8.14653	66.36	0.01543
24	Oktober	540	535.3318	4.6681	4.66811	21.79	0.00864
Jumlah		12876	12918.01	-42.01	220.319	2913	0.4124

Perhitungan Error Dealer Citra

- **Moving Average N = 3**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{8}{24} \\ &= 0.333\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{264}{24} \\ &= 11\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{4160}{24} \\ &= 173.333\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.491 \\ &= 2.050\end{aligned}$$

- **Moving Average N = 4**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{6}{24} \\ &= 0.25\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{240}{24} \\ &= 10\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{3708}{24} \\ &= 154.5\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.447 \\ &= 1.864\end{aligned}$$

- **Single Exponential Smoothing $\alpha = 0.1$**

$$\begin{aligned}\mathbf{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{-42.013}{24} \\ &= -2\end{aligned}$$

$$\begin{aligned}\mathbf{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{220.319}{24} \\ &= 9.180\end{aligned}$$

$$\begin{aligned}\mathbf{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{2913.72}{24} \\ &= 121.405\end{aligned}$$

$$\begin{aligned}\mathbf{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.412 \\ &= 1.719\end{aligned}$$

3. Dealer Depo Bangunan

- Moving Average N = 3

t	Dealer	Permintaan Aktual	Peramalaan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	648	648	0	0	0	0.00000
2	Desember	660	644	16	16	256	0.02424
3	Januari	648	648	0	0	0	0.00000
4	Februari	636	652	-16	16	256	0.02516
5	Maret	648	648	0	0	0	0.00000
6	April	624	644	-20	20	400	0.03205
7	Mei	648	636	12	12	144	0.01852
8	Juni	636	640	-4	4	16	0.00629
9	Juli	636	636	0	0	0	0.00000
10	Agustus	624	640	-16	16	256	0.02564
11	September	648	632	16	16	256	0.02469
12	Oktober	660	636	24	24	576	0.03636
13	November	648	644	4	4	16	0.00617
14	Desember	648	652	-4	4	16	0.00617
15	Januari	624	652	-28	28	784	0.04487
16	Februari	636	640	-4	4	16	0.00629
17	Maret	648	636	12	12	144	0.01852
18	April	624	636	-12	12	144	0.01923
19	Mei	648	636	12	12	144	0.01852
20	Juni	660	640	20	20	400	0.03030
21	Juli	660	644	16	16	256	0.02424
22	Agustus	648	656	-8	8	64	0.01235
23	September	648	656	-8	8	64	0.01235
24	Oktober	624	652	-28	28	784	0.04487
Jumlah		15432	15448	-16	280	4992	0.43683

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	648	648	0	0	0	0.00000
2	Desember	660	648	12	12	144	0.01818
3	Januari	648	648	0	0	0	0.00000
4	Februari	636	648	-12	12	144	0.01887
5	Maret	648	648	0	0	0	0.00000
6	April	624	648	-24	24	576	0.03846
7	Mei	648	639	9	9	81	0.01389
8	Juni	636	639	-3	3	9	0.00472
9	Juli	636	639	-3	3	9	0.00472
10	Agustus	624	636	-12	12	144	0.01923
11	September	648	636	12	12	144	0.01852
12	Oktober	660	636	24	24	576	0.03636
13	November	648	642	6	6	36	0.00926
14	Desember	648	645	3	3	9	0.00463
15	Januari	624	651	-27	27	729	0.04327
16	Februari	636	645	-9	9	81	0.01415
17	Maret	648	639	9	9	81	0.01389
18	April	624	639	-15	15	225	0.02404
19	Mei	648	633	15	15	225	0.02315
20	Juni	660	639	21	21	441	0.03182
21	Juli	660	645	15	15	225	0.02273
22	Agustus	648	648	0	0	0	0.00000
23	September	648	654	-6	6	36	0.00926
24	Oktober	624	654	-30	30	900	0.04808
Jumlah		15432	15447	-15	267	4815	0.41721

- **Single Exponential Smooting $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	648	644	4	4	16	0.00617
2	Desember	660	644.4	15.6	15.6	243.3	0.02364
3	Januari	648	645.96	2.04	2.04	4.161	0.00315
4	Februari	636	646.164	-10.164	10.164	103.3	0.01598
5	Maret	648	645.1476	2.8524	2.8524	8.136	0.00440
6	April	624	645.4328	-21.432	21.432	459.3	0.03435
7	Mei	648	643.2895	4.7104	4.7104	22.18	0.00727
8	Juni	636	643.7606	-7.7606	7.7606	60.22	0.01220
9	Juli	636	642.9845	-6.9845	6.9845	48.78	0.01098
10	Agustus	624	642.2860	-18.286	18.286	334.3	0.02930
11	September	648	640.4574	7.54252	7.5425	56.88	0.01164
12	Oktober	660	641.2117	18.7882	18.788	352.9	0.02847
13	November	648	643.0905	4.90944	4.9094	24.10	0.00758
14	Desember	648	643.5815	4.41849	4.4184	19.52	0.00682
15	Januari	624	644.0233	-20.023	20.023	400.9	0.03209
16	Februari	636	642.0210	-6.0210	6.0210	36.25	0.00947
17	Maret	648	641.4189	6.58108	6.5810	43.31	0.01016
18	April	624	642.0770	-18.077	18.077	326.7	0.02897
19	Mei	648	640.2693	7.73067	7.7306	59.76	0.01193
20	Juni	660	641.0423	18.9576	18.957	359.3	0.02872
21	Juli	660	642.9381	17.061	17.06	291.1	0.02585
22	Agustus	648	644.6443	3.35566	3.3556	11.26	0.00518
23	September	648	644.9799	3.02009	3.0200	9.120	0.00466
24	Oktober	624	645.2819	-21.281	21.281	452.9	0.03411
Jumlah		15432	15440.46	-8.4627	251.59	3744	0.39307

Perhitungan Error Dealer Depo Bangunan

- **Moving Average N = 3**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{-16}{24} \\ &= -1\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{280}{24} \\ &= 11.667\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{4992}{24} \\ &= 208\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.436 \\ &= 1.820\end{aligned}$$

- **Moving Average N = 4**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{-15}{24} \\ &= -1\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{267}{24} \\ &= 11.125\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{4815}{24} \\ &= 200.625\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.417 \\ &= 1.738\end{aligned}$$

- **Single Exponential Smoothing $\alpha = 0.1$**

$$\begin{aligned}\mathbf{ME} &= \frac{\Sigma \mathit{Error}}{n} \\ &= \frac{-8.462}{24} \\ &= -0.35\end{aligned}$$

$$\begin{aligned}\mathbf{MAD} &= \frac{\Sigma \mathit{Abs. Error}}{n} \\ &= \frac{251.599}{24} \\ &= 10.483\end{aligned}$$

$$\begin{aligned}\mathbf{MSE} &= \frac{\Sigma \mathit{Error}^2}{n} \\ &= \frac{3744.264}{24} \\ &= 156.01\end{aligned}$$

$$\begin{aligned}\mathbf{MAPE} &= \frac{100}{n} \times \Sigma \frac{\mathit{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.393 \\ &= 1.638\end{aligned}$$

4. Delaer Mitra 10

- Moving Average N = 3

t	Dealer	Permintaan Aktual	Peramala n	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	2488	2436	52	52	2704	0.02090
2	Desember	2412	2461.33	-49.33	49.33	2433	0.02045
3	Januari	2448	2449.33	-1.33	1.33	1.78	0.00054
4	Februari	2448	2449.33	-1.33	1.33	1.78	0.00054
5	Maret	2424	2436	-12	12	144	0.00495
6	April	2352	2440	-88	88	7744	0.03741
7	Mei	2400	2408	-8	8	64	0.00333
8	Juni	2448	2392	56	56	3136	0.02288
9	Juli	2448	2400	48	48	2304	0.01961
10	Agustus	2496	2432	64	64	4096	0.02564
11	September	2472	2464	8	8	64	0.00324
12	Oktober	2378	2472	-94	94	8836	0.03953
13	November	2400	2448.67	-48.67	48.67	2368	0.02028
14	Desember	2424	2416.67	7.33	7.33	53.78	0.00303
15	Januari	2448	2400.67	47.33	47.33	2240	0.01934
16	Februari	2496	2424	72	72	5184	0.02885
17	Maret	2496	2456	40	40	1600	0.01603
18	April	2532	2480	52	52	2704	0.02054
19	Mei	2400	2508	-108	108	11664	0.04500
20	Juni	2448	2476	-28	28	784	0.01144
21	Juli	2448	2460	-12	12	144	0.00490
22	Agustus	2496	2432	64	64	4096	0.02564
23	September	2448	2464	-16	16	256	0.00654
24	Oktober	2496	2464	32	32	1024	0.01282
Jumlah		58746	58670	76	1009.3	63648	0.41341

- Moving Average N= 4

T	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	2488	2449	39	39	1521	0.01568
2	Desember	2412	2449	-37	37	1369	0.01534
3	Januari	2448	2449	-1	1	1	0.00041
4	Februari	2448	2449	-1	1	1	0.00041
5	Maret	2424	2449	-25	25	625	0.01031
6	April	2352	2433	-81	81	6561	0.03444
7	Mei	2400	2418	-18	18	324	0.00750
8	Juni	2448	2406	42	42	1764	0.01716
9	Juli	2448	2406	42	42	1764	0.01716
10	Agustus	2496	2412	84	84	7056	0.03365
11	September	2472	2448	24	24	576	0.00971
12	Oktober	2378	2466	-88	88	7744	0.03701
13	November	2400	2448.5	-48.5	48.5	2352. 25	0.02021
14	Desember	2424	2436.5	-12.5	12.5	156.2	0.00516
15	Januari	2448	2418.5	29.5	29.5	870	0.01205
16	Februari	2496	2412.5	83.5	83.5	6972	0.03345
17	Maret	2496	2442	54	54	2916	0.02163
18	April	2532	2466	66	66	4356	0.02607
19	Mei	2400	2493	-93	93	8649	0.03875
20	Juni	2448	2481	-33	33	1089	0.01348
21	Juli	2448	2469	-21	21	441	0.00858
22	Agustus	2496	2457	39	39	1521	0.01563
23	September	2448	2448	0	0	0	0.00000
24	Oktober	2496	2460	36	36	1296	0.01442
Jumlah		58746	58666	80	998	59925	0.40819

- **Single Exponential Smooting $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	2488	2428.667	59.33	59.333	3520.4	0.02385
2	Desember	2412	2434.60	-22.6	22.60	510.76	0.00937
3	Januari	2448	2432.34	15.66	15.66	245.24	0.00640
4	Februari	2448	2433.91	14.09	14.09	198.64	0.00576
5	Maret	2424	2435.315	-11.3	11.315	128.03	0.00467
6	April	2352	2434.184	-82.1	82.183	6754.1	0.03494
7	Mei	2400	2425.965	-25.9	25.965	674.20	0.01082
8	Juni	2448	2423.369	24.63	24.631	606.68	0.01006
9	Juli	2448	2425.832	22.16	22.167	491.41	0.00906
10	Agustus	2496	2428.049	67.95	67.951	4617.3	0.02722
11	September	2472	2434.844	37.15	37.156	1380.5	0.01503
12	Oktober	2378	2438.56	-60.5	60.559	3667.4	0.02547
13	November	2400	2432.50	-32.5	32.50	1056.4	0.01354
14	Desember	2424	2429.25	-5.25	5.25	27.60	0.00217
15	Januari	2448	2428.73	19.27	19.27	371.41	0.00787
16	Februari	2496	2430.655	65.34	65.344	4269.9	0.02618
17	Maret	2496	2437.19	58.81	58.810	3458.6	0.02356
18	April	2532	2443.071	88.92	88.929	7908.4	0.03512
19	Mei	2400	2451.964	-51.9	51.963	2700.2	0.02165
20	Juni	2448	2446.767	1.232	1.2327	1.5197	0.00050
21	Juli	2448	2446.891	1.109	1.1094	1.2309	0.00045
22	Agustus	2496	2447.001	48.99	48.998	2400.8	0.01963
23	September	2448	2451.901	-3.90	3.9013	15.220	0.00159
24	Oktober	2496	2451.511	44.48	44.488	1979.2	0.01782
Jumlah		58746	58473.07	272.9	865.43	46985	0.35274

Perhitungan Error Dealer Mitra 10

- Moving Average N = 3

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{76}{24} \\ &= 3.2\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{1009.33}{24} \\ &= 42.056\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{63648}{24} \\ &= 2652\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.413 \\ &= 1.723\end{aligned}$$

- Moving Average N = 4

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{80}{24} \\ &= 3.3\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{998}{24} \\ &= 41.583\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{59925}{24} \\ &= 2496.875\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.408 \\ &= 1.701\end{aligned}$$

- **Single Exponential Smoothing $\alpha = 0.1$**

$$\begin{aligned}\mathbf{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{272.933}{24} \\ &= 11.37\end{aligned}$$

$$\begin{aligned}\mathbf{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{865.43}{24} \\ &= 36.059\end{aligned}$$

$$\begin{aligned}\mathbf{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{46985.85}{24} \\ &= 1957.744\end{aligned}$$

$$\begin{aligned}\mathbf{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.352 \\ &= 1.470\end{aligned}$$

5. Dealer Rumahku

- Moving Average N = 3

t	Dealer Bulan	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
		Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	624	608	16	16	256	0.02564
2	Desember	600	616.00	-16.00	16.00	256	0.02667
3	Januari	612	612.00	0.00	0.00	0.00	0.00000
4	Februari	612	612.00	0.00	0.00	0.00	0.00000
5	Maret	624	608	16	16	256	0.02564
6	April	588	616	-28	28	784	0.04762
7	Mei	600	608	-8	8	64	0.01333
8	Juni	612	604	8	8	64	0.01307
9	Juli	612	600	12	12	144	0.01961
10	Agustus	624	608	16	16	256	0.02564
11	September	600	616	-16	16	256	0.02667
12	Oktober	588	612	-24	24	576	0.04082
13	November	600	604.00	-4.00	4.00	16.00	0.00667
14	Desember	612	596.00	16.00	16.00	256	0.02614
15	Januari	612	600.00	12.00	12.00	144	0.01961
16	Februari	624	608	16	16	256	0.02564
17	Maret	624	616	8	8	64	0.01282
18	April	636	620	16	16	256	0.02516
19	Mei	600	628	-28	28	784	0.04667
20	Juni	612	620	-8	8	64	0.01307
21	Juli	612	616	-4	4	16	0.00654
22	Agustus	624	608	16	16	256	0.02564
23	September	612	616	-4	4	16	0.00654
24	Oktober	624	616	8	8	64	0.01282
Jumlah		14688	14668	20	300.00	5104	0.49201

- Moving Average N= 4

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	624	612	12	12	144	0.01923
2	Desember	600	612	-12	12	144	0.02000
3	Januari	612	612	0	0	0	0.00000
4	Februari	612	612	0	0	0	0.00000
5	Maret	624	612	12	12	144	0.01923
6	April	588	612	-24	24	576	0.04082
7	Mei	600	609	-9	9	81	0.01500
8	Juni	612	606	6	6	36	0.00980
9	Juli	612	606	6	6	36	0.00980
10	Agustus	624	603	21	21	441	0.03365
11	September	600	612	-12	12	144	0.02000
12	Oktober	588	612	-24	24	576	0.04082
13	November	600	606	-6	6	36	0.01000
14	Desember	612	603	9	9	81	0.01471
15	Januari	612	600	12	12	144	0.01961
16	Februari	624	603	21	21	441	0.03365
17	Maret	624	612	12	12	144	0.01923
18	April	636	618	18	18	324	0.02830
19	Mei	600	624	-24	24	576	0.04000
20	Juni	612	621	-9	9	81	0.01471
21	Juli	612	618	-6	6	36	0.00980
22	Agustus	624	615	9	9	81	0.01442
23	September	612	612	0	0	0	0.00000
24	Oktober	624	615	9	9	81	0.01442
Jumlah		14688	14667	21	273	4347	0.44721

- **Single Exponential Smoothing $\alpha = 0.1$**

t	Dealer	Permintaan Aktual	Peramalan	Error	Abs. Error	Error ²	Abs.E / Xi
	Bulan	Xi	Fi	Xi-Fi	Xi-Fi	Xi-Fi ²	
1	November	624	610	14	14	196	0.02244
2	Desember	600	611.40	-11.40	11.40	129.96	0.01900
3	Januari	612	610.26	1.74	1.74	3.03	0.00284
4	Februari	612	610.43	1.57	1.57	2.45	0.00256
5	Maret	624	610.5906	13.409	13.4094	179.81	0.02149
6	April	588	611.93154	-23.93	23.9315	572.71	0.04070
7	Mei	600	609.53839	-9.538	9.53838	90.980	0.01590
8	Juni	612	608.58455	3.4154	3.41545	11.665	0.00558
9	Juli	612	608.92609	3.0739	3.07390	9.4489	0.00502
10	Agustus	624	609.23348	14.766	14.7665	218.05	0.02366
11	September	600	610.71014	-10.71	10.7101	114.70	0.01785
12	Oktober	588	609.63912	-21.63	21.6391	468.25	0.03680
13	November	600	607.48	-7.48	7.48	55.88	0.01246
14	Desember	612	606.73	5.27	5.27	27.80	0.00861
15	Januari	612	607.25	4.75	4.75	22.52	0.00775
16	Februari	624	607.72943	16.270	16.2705	264.73	0.02607
17	Maret	624	609.35648	14.643	14.6435	214.43	0.02347
18	April	636	610.82084	25.179	25.1791	633.99	0.03959
19	Mei	600	613.33875	-13.33	13.3387	177.92	0.02223
20	Juni	612	612.00488	-0.004	0.00487	2.379	0.00001
21	Juli	612	612.00439	-0.004	0.00438	1.927	0.00001
22	Agustus	624	612.00395	11.996	11.9960	143.90	0.01922
23	September	612	613.20356	-1.203	1.20355	1.4485	0.00197
24	Oktober	624	613.0832	10.916	10.9168	119.17	0.01749
Jumlah		14688	14646.251	41.748	240.24	3658.8	0.39273

Perhitungan Error Dealer Depo Bangunan

- **Moving Average N = 3**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{20}{24} \\ &= 0.83\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{300}{24} \\ &= 12.5\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{5104}{24} \\ &= 212.667\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.492 \\ &= 2.050\end{aligned}$$

- **Moving Average N = 4**

$$\begin{aligned}\text{ME} &= \frac{\Sigma \text{Error}}{n} \\ &= \frac{21}{24} \\ &= 0.88\end{aligned}$$

$$\begin{aligned}\text{MAD} &= \frac{\Sigma \text{Abs. Error}}{n} \\ &= \frac{273}{24} \\ &= 11.375\end{aligned}$$

$$\begin{aligned}\text{MSE} &= \frac{\Sigma \text{Error}^2}{n} \\ &= \frac{4347}{24} \\ &= 181.125\end{aligned}$$

$$\begin{aligned}\text{MAPE} &= \frac{100}{n} \times \Sigma \frac{\text{Abs } E}{X_i} \\ &= \frac{100}{24} \times 0.447 \\ &= 1.863\end{aligned}$$

- **Single Exponential Smoothing $\alpha = 0.1$**

$$\begin{aligned}\mathbf{ME} &= \frac{\Sigma \mathit{Error}}{n} \\ &= \frac{41.748}{24} \\ &= 1.74\end{aligned}$$

$$\begin{aligned}\mathbf{MAD} &= \frac{\Sigma \mathit{Abs. Error}}{n} \\ &= \frac{240.24}{24} \\ &= 10.010\end{aligned}$$

$$\begin{aligned}\mathbf{MSE} &= \frac{\Sigma \mathit{Error}^2}{n} \\ &= \frac{3658.873}{24} \\ &= 152.453\end{aligned}$$

$$\begin{aligned}\mathbf{MAPE} &= \frac{100}{n} \times \Sigma \frac{\mathit{Abs E}}{X_i} \\ &= \frac{100}{24} \times 0.392 \\ &= 1.636\end{aligned}$$

1. Perhitungan Tracking Signal dan Moving Range Chart Dealer ACE Hardware

- Tracking Signal

Periode	Permintaan Aktual	Peramalan	Error	RSFE	ABS.Error	CUMM (E)	MAD	TRACKING SIGNAL
1	1572	1574	-2	-2	2	2	2	-1
2	1572	1573.8	-1.8	-3.8	1.8	3.8	1.9	-2
3	1560	1573.62	-13.62	-17.42	13.62	17.42	5.806667	-3
4	1560	1572.258	-12.258	-29.678	12.258	29.678	7.4195	-4
5	1584	1571.032	12.9678	-16.7102	12.9678	42.6458	8.52916	-1.95918
6	1596	1572.329	23.67102	6.96082	23.67102	66.31682	11.0528	0.629779
7	1560	1574.696	-14.6961	-7.735262	14.69608	81.0129	11.57327	-0.66837
8	1572	1573.226	-1.22647	-8.9617358	1.226474	82.23938	10.27992	-0.87177
9	1620	1574.696	45.304	36.342264	45.304	127.5434	14.17149	2.564464
10	1608	1577.793	30.20656	66.54882	30.20656	157.7499	15.77499	4.218628
11	1584	1580.814	3.185901	69.734721	3.185901	160.9358	14.63053	4.766384
12	1572	1581.133	-9.13269	60.602032	9.132689	170.0685	14.17238	4.276067
13	1572	1580.219	-8.21942	52.382611	8.219421	178.2879	13.71446	3.819518
14	1572	1579.397	-7.39748	44.985133	7.397478	185.6854	13.26324	3.391714
15	1572	1578.658	-6.65773	38.327402	6.657731	192.3432	12.82288	2.988986
16	1560	1577.992	-17.992	20.335444	17.99196	210.3351	13.14594	1.546899
17	1560	1576.193	-16.1928	4.1426826	16.19276	226.5279	13.32517	0.310892
18	1584	1574.573	9.426514	13.569197	9.426514	235.9544	13.10858	1.035139
19	1596	1575.516	20.48386	34.05306	20.48386	256.4382	13.49675	2.523056
20	1560	1577.565	-17.5645	16.488537	17.56452	274.0028	13.70014	1.203531
21	1572	1575.808	-3.80807	12.680466	3.808071	277.8108	13.22909	0.958529
22	1620	1575.427	44.57274	57.253202	44.57274	322.3836	14.6538	3.907055
23	1608	1579.885	28.11546	85.368664	28.11546	350.499	15.23909	5.601953
24	1584	1582.696	1.303916	86.67258	1.303916	351.803	14.65846	5.912804

- Moving Range Chart

Periode	Permintaan Aktual	Peramalan	Error	Moving Range Chart	MR rata- rata	A+	A-	B+	B-	BKA	BKB
	Xi	Fi	Xi-Fi								
1	1572	1574	-2		17.29802	30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
2	1572	1573.8	-1.8	0.2		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
3	1560	1573.62	-13.62	11.82		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
4	1560	1572.258	-12.258	1.362		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
5	1584	1571.032	12.9678	25.2258		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
6	1596	1572.329	23.67102	10.70322		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
7	1560	1574.696	-14.6961	38.367102		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
8	1572	1573.226	-1.22647	13.469608		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
9	1620	1574.696	45.304	46.530474		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
10	1608	1577.793	30.20656	15.097444		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
11	1584	1580.814	3.185901	27.020656		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
12	1572	1581.133	-9.13269	12.31859		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
13	1572	1580.219	-8.21942	0.9132689		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
14	1572	1579.397	-7.39748	0.8219421		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
15	1572	1578.658	-6.65773	0.7397478		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
16	1560	1577.992	-17.992	11.334227		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
17	1560	1576.193	-16.1928	1.7991958		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
18	1584	1574.573	9.426514	25.619276		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
19	1596	1575.516	20.48386	11.057349		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
20	1560	1577.565	-17.5645	38.048386		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
21	1572	1575.808	-3.80807	13.756452		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
22	1620	1575.427	44.57274	48.380807		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
23	1608	1579.885	28.11546	16.457274		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
24	1584	1582.696	1.303916	26.811546		30.61749	-30.6175	15.39523	-15.3952	46.01272	-46.0127
Jumlah				397.85437							

2. Perhitungan Tracking Signal dan Moving Range Chart Dealer Citra

- Tracking Signal

Periode	Permintaan Aktual	Peramalan	Error	RSFE	ABS.Error	CUMM (E)	MAD	TRACKING SIGNAL
	Xi	Fi	Xi-Fi					
1	552	540	12	12	12	12	12	1
2	540	541.2	-1.2	10.8	1.2	13.2	6.6	1.636364
3	540	541.08	-1.08	9.72	1.08	14.28	4.76	2.042017
4	528	540.972	-12.972	-3.252	12.972	27.252	6.813	-0.47732
5	528	539.6748	-11.6748	-14.9268	11.6748	38.9268	7.78536	-1.91729
6	552	538.5073	13.49268	-1.43412	13.49268	52.41948	8.73658	-0.16415
7	552	539.8566	12.14341	10.709292	12.14341	64.56289	9.22327	1.161117
8	540	541.0709	-1.07093	9.6383628	1.070929	65.63382	8.204228	1.174804
9	528	540.9638	-12.9638	-3.3254735	12.96384	78.59766	8.733073	-0.38079
10	528	539.6675	-11.6675	-14.992926	11.66745	90.26511	9.026511	-1.66099
11	540	538.5007	1.499293	-13.493634	1.499293	91.7644	8.342218	-1.61751
12	540	538.6506	1.349363	-12.14427	1.349363	93.11377	7.759481	-1.56509
13	552	538.7856	13.21443	1.0701568	13.21443	106.3282	8.179092	0.130841
14	540	540.107	-0.10702	0.9631412	0.107016	106.4352	7.602515	0.126687
15	528	540.0963	-12.0963	-11.133173	12.09631	118.5315	7.902102	-1.40889
16	516	538.8867	-22.8867	-34.019856	22.88668	141.4182	8.838638	-3.84899
17	528	536.598	-8.59801	-42.61787	8.598014	150.0162	8.824484	-4.8295
18	528	535.7382	-7.73821	-50.356083	7.738213	157.7544	8.764135	-5.7457
19	516	534.9644	-18.9644	-69.320475	18.96439	176.7188	9.300991	-7.45302
20	540	533.068	6.932047	-62.388427	6.932047	183.6509	9.182544	-6.79424
21	540	533.7612	6.238843	-56.149585	6.238843	189.8897	9.042367	-6.20961
22	552	534.385	17.61496	-38.534626	17.61496	207.5047	9.432031	-4.08551
23	528	536.1465	-8.14654	-46.681163	8.146537	215.6512	9.37614	-4.97872
24	540	535.3319	4.668116	-42.013047	4.668116	220.3193	9.179972	-4.5766

- Moving Range Chart

Periode	Permintaan Aktual	Peramalan	Error	Moving Range Chart	MR rata- rata	A+	A-	B+	B-	BKA	BKB
	Xi	Fi	Xi-Fi								
1	552	540	12		10.59256	18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
2	540	541.2	-1.2	13.2		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
3	540	541.08	-1.08	0.12		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
4	528	540.972	-12.972	11.892		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
5	528	539.6748	-11.6748	1.2972		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
6	552	538.5073	13.49268	25.16748		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
7	552	539.8566	12.14341	1.349268		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
8	540	541.0709	-1.07093	13.214341		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
9	528	540.9638	-12.9638	11.892907		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
10	528	539.6675	-11.6675	1.2963836		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
11	540	538.5007	1.499293	13.166745		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
12	540	538.6506	1.349363	0.1499293		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
13	552	538.7856	13.21443	11.865064		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
14	540	540.107	-0.10702	13.321443		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
15	528	540.0963	-12.0963	11.989298		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
16	516	538.8867	-22.8867	10.790369		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
17	528	536.598	-8.59801	14.288668		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
18	528	535.7382	-7.73821	0.8598014		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
19	516	534.9644	-18.9644	11.226179		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
20	540	533.068	6.932047	25.896439		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
21	540	533.7612	6.238843	0.6932047		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
22	552	534.385	17.61496	11.376116		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
23	528	536.1465	-8.14654	25.761496		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
24	540	535.3319	4.668116	12.814654		18.74884	-18.7488	9.427382	-9.42738	28.17622	-28.1762
Jumlah				243.62899							

3. Perhitungan Tracking Signal dan Moving Range Chart Dealer Depo Bangunan

- Tracking Signal

Periode	Permintaan Aktual	Peramalan	Error	RSFE	ABS.Error	CUMM (E)	MAD	TRACKING SIGNAL
	Xi	Fi	Xi-Fi					
1	648	644	4	4	4	4	4	1
2	660	644.4	15.6	19.6	15.6	19.6	9.8	2
3	648	645.96	2.04	21.64	2.04	21.64	7.213333	3
4	636	646.164	-10.164	11.476	10.164	31.804	7.951	1.44334
5	648	645.1476	2.8524	14.3284	2.8524	34.6564	6.93128	2.067208
6	624	645.4328	-21.4328	-7.10444	21.43284	56.08924	9.348207	-0.75998
7	648	643.2896	4.710444	-2.393996	4.710444	60.79968	8.685669	-0.27563
8	636	643.7606	-7.7606	-10.154596	7.7606	68.56028	8.570036	-1.1849
9	636	642.9845	-6.98454	-17.139137	6.98454	75.54482	8.393869	-2.04186
10	624	642.2861	-18.2861	-35.425223	18.28609	93.83091	9.383091	-3.77543
11	648	640.4575	7.542522	-27.882701	7.542522	101.3734	9.215767	-3.02554
12	660	641.2117	18.78827	-9.0944307	18.78827	120.1617	10.01348	-0.90822
13	648	643.0906	4.909443	-4.1849876	4.909443	125.0711	9.620857	-0.43499
14	648	643.5815	4.418499	0.2335111	4.418499	129.4896	9.24926	0.025246
15	624	644.0234	-20.0234	-19.78984	20.02335	149.513	9.967533	-1.98543
16	636	642.021	-6.02102	-25.810856	6.021016	155.534	9.720876	-2.6552
17	648	641.4189	6.581086	-19.22977	6.581086	162.1151	9.536182	-2.01651
18	624	642.077	-18.077	-37.306793	18.07702	180.1921	10.01067	-3.7267
19	648	640.2693	7.730679	-29.576114	7.730679	187.9228	9.890674	-2.9903
20	660	641.0424	18.95761	-10.618503	18.95761	206.8804	10.34402	-1.02654
21	660	642.9381	17.06185	6.4433477	17.06185	223.9423	10.66392	0.60422
22	648	644.6443	3.355665	9.7990129	3.355665	227.2979	10.33172	0.948439
23	648	644.9799	3.020099	12.819112	3.020099	230.318	10.01383	1.280141
24	624	645.2819	-21.2819	-8.4627996	21.28191	251.5999	10.48333	-0.80726

- Moving Range Chart

Periode	Permintaan Aktual	Peramalan	Error	Moving Range Chart	MR rata-rata	A+	A-	B+	B-	BKA	BKB
	Xi	Fi	Xi-Fi								
1	648	644	4		14.33827	25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
2	660	644.4	15.6	11.6		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
3	648	645.96	2.04	13.56		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
4	636	646.164	-10.164	12.204		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
5	648	645.1476	2.8524	13.0164		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
6	624	645.4328	-21.4328	24.28524		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
7	648	643.2896	4.710444	26.143284		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
8	636	643.7606	-7.7606	12.471044		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
9	636	642.9845	-6.98454	0.77606		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
10	624	642.2861	-18.2861	11.301546		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
11	648	640.4575	7.542522	25.828609		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
12	660	641.2117	18.78827	11.245748		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
13	648	643.0906	4.909443	13.878827		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
14	648	643.5815	4.418499	0.4909443		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
15	624	644.0234	-20.0234	24.44185		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
16	636	642.021	-6.02102	14.002335		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
17	648	641.4189	6.581086	12.602102		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
18	624	642.077	-18.077	24.658109		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
19	648	640.2693	7.730679	25.807702		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
20	660	641.0424	18.95761	11.226932		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
21	660	642.9381	17.06185	1.8957611		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
22	648	644.6443	3.355665	13.706185		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
23	648	644.9799	3.020099	0.3355665		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
24	624	645.2819	-21.2819	24.30201		25.37874	-25.3787	12.76106	-12.7611	38.1398	-38.1398
Jumlah				329.78025							

4. Perhitungan Tracking Signal dan Moving Range Chart Dealer Mitra 10

- Tracking Signal

Periode	Permintaan Aktual	Peramalan	Error	RSFE	ABS.Error	CUMM (E)	MAD	TRACKING SIGNAL
	Xi	Fi	Xi-Fi					
1	2488	2428.667	59.33333	59.333333	59.33333	59.33333	59.33333	1
2	2412	2434.6	-22.6	36.733333	22.6	81.93333	40.96667	0.896664
3	2448	2432.34	15.66	52.393333	15.66	97.59333	32.53111	1.610561
4	2448	2433.906	14.094	66.487333	14.094	111.6873	27.92183	2.381195
5	2424	2435.315	-11.3154	55.171933	11.3154	123.0027	24.60055	2.242712
6	2352	2434.184	-82.1839	-27.011927	82.18386	205.1866	34.19777	-0.78987
7	2400	2425.965	-25.9655	-52.977401	25.96547	231.1521	33.02172	-1.60432
8	2448	2423.369	24.63107	-28.346327	24.63107	255.7831	31.97289	-0.88657
9	2448	2425.832	22.16797	-6.1783612	22.16797	277.9511	30.88346	-0.20005
10	2496	2428.049	67.95117	61.772808	67.95117	345.9023	34.59023	1.785846
11	2472	2434.844	37.15605	98.928861	37.15605	383.0583	34.82348	2.840866
12	2378	2438.56	-60.5596	38.369308	60.55955	443.6179	36.96816	1.037902
13	2400	2432.504	-32.5036	5.8657105	32.5036	476.1215	36.62473	0.160157
14	2424	2429.253	-5.25324	0.6124728	5.253238	481.3747	34.38391	0.017813
15	2448	2428.728	19.27209	19.884559	19.27209	500.6468	33.37645	0.595766
16	2496	2430.655	65.34488	85.229436	65.34488	565.9917	35.37448	2.409348
17	2496	2437.19	58.81039	144.03983	58.81039	624.8021	36.75306	3.919124
18	2532	2443.071	88.92935	232.96918	88.92935	713.7314	39.65175	5.875383
19	2400	2451.964	-51.9636	181.00559	51.96358	765.695	40.29974	4.491483
20	2448	2446.767	1.232774	182.23837	1.232774	766.9278	38.34639	4.752426
21	2448	2446.891	1.109497	183.34786	1.109497	768.0373	36.5732	5.013175
22	2496	2447.001	48.99855	232.34641	48.99855	817.0358	37.13799	6.2563
23	2448	2451.901	-3.90131	228.4451	3.901308	820.9371	35.69292	6.400292
24	2496	2451.511	44.48882	272.93393	44.48882	865.426	36.05941	7.569006

- Moving Range Chart

Periode	Permintaan Aktual	Peramalan	Error	Moving Range Chart	MR rata- rata	A+	A-	B+	B-	BKA	BKB
	Xi	Fi	Xi-Fi								
1	2488	2428.667	59.33333		43.8069	77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
2	2412	2434.6	-22.6	81.933333		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
3	2448	2432.34	15.66	38.26		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
4	2448	2433.906	14.094	1.566		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
5	2424	2435.315	-11.3154	25.4094		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
6	2352	2434.184	-82.1839	70.86846		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
7	2400	2425.965	-25.9655	56.218386		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
8	2448	2423.369	24.63107	50.596547		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
9	2448	2425.832	22.16797	2.4631073		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
10	2496	2428.049	67.95117	45.783203		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
11	2472	2434.844	37.15605	30.795117		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
12	2378	2438.56	-60.5596	97.715605		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
13	2400	2432.504	-32.5036	28.055955		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
14	2424	2429.253	-5.25324	27.25036		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
15	2448	2428.728	19.27209	24.525324		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
16	2496	2430.655	65.34488	46.072791		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
17	2496	2437.19	58.81039	6.5344877		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
18	2532	2443.071	88.92935	30.118961		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
19	2400	2451.964	-51.9636	140.89294		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
20	2448	2446.767	1.232774	53.196358		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
21	2448	2446.891	1.109497	0.1232774		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
22	2496	2447.001	48.99855	47.88905		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
23	2448	2451.901	-3.90131	52.899855		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
24	2496	2451.511	44.48882	48.390131		77.53821	-77.5382	38.98814	-38.9881	116.5263	-116.526
Jumlah				1007.5586							

5. Perhitungan Tracking Signal dan Moving Range Chart Dealer Rumahku

- Tracking Signal

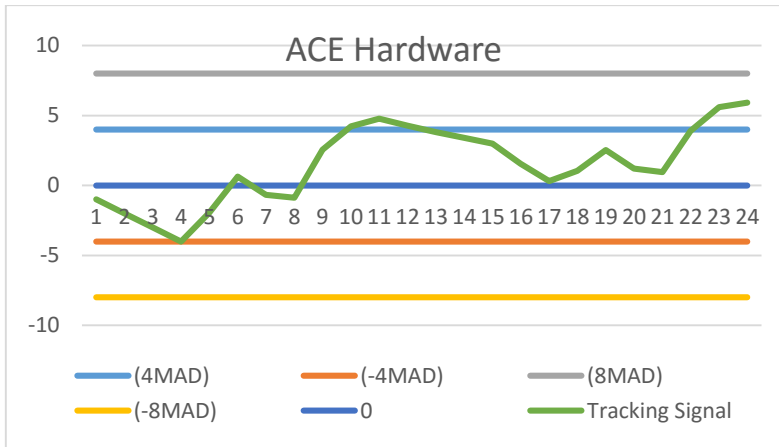
Periode	Permintaan Aktual	Peramalan	Error	RSFE	ABS.Error	CUMM (E)	MAD	TRACKING SIGNAL
	Xi	Fi	Xi-Fi					
1	624	610	14	14	14	14	14	1
2	600	611.4	-11.4	2.6	11.4	25.4	12.7	0.204724
3	612	610.26	1.74	4.34	1.74	27.14	9.046667	0.479735
4	612	610.434	1.566	5.906	1.566	28.706	7.1765	0.822964
5	624	610.5906	13.4094	19.3154	13.4094	42.1154	8.42308	2.293152
6	588	611.9315	-23.9315	-4.61614	23.93154	66.04694	11.00782	-0.41935
7	600	609.5384	-9.53839	-14.154526	9.538386	75.58533	10.7979	-1.31086
8	612	608.5845	3.415453	-10.739073	3.415453	79.00078	9.875097	-1.08749
9	612	608.9261	3.073907	-7.6651661	3.073907	82.07469	9.11941	-0.84053
10	624	609.2335	14.76652	7.1013505	14.76652	96.8412	9.68412	0.733298
11	600	610.7101	-10.7101	-3.6087845	10.71014	107.5513	9.777394	-0.36909
12	588	609.6391	-21.6391	-25.247906	21.63912	129.1905	10.76587	-2.34518
13	600	607.4752	-7.47521	-32.723115	7.475209	136.6657	10.51274	-3.11271
14	612	606.7277	5.272312	-27.450804	5.272312	141.938	10.13843	-2.7076
15	612	607.2549	4.74508	-22.705724	4.74508	146.6831	9.778871	-2.32192
16	624	607.7294	16.27057	-6.4351512	16.27057	162.9536	10.1846	-0.63185
17	624	609.3565	14.64352	8.208364	14.64352	177.5971	10.44689	0.785723
18	636	610.8208	25.17916	33.387528	25.17916	202.7763	11.26535	2.963736
19	600	613.3388	-13.3388	20.048775	13.33875	216.1151	11.37448	1.762611
20	612	612.0049	-0.00488	20.043897	0.004877	216.1199	10.806	1.854886
21	612	612.0044	-0.00439	20.039508	0.00439	216.1243	10.29163	1.947165
22	624	612.004	11.99605	32.035557	11.99605	228.1204	10.36911	3.089519
23	612	613.2036	-1.20356	30.832001	1.203556	229.3239	9.970606	3.09229
24	624	613.0832	10.9168	41.748801	10.9168	240.2407	10.01003	4.170697

- Moving Range Chart

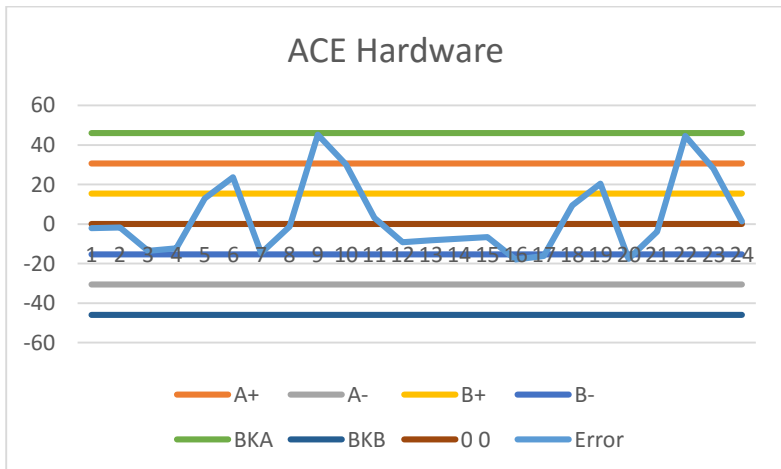
Periode	Permintaan Aktual	Peramalan	Error	Moving Range Chart	MR rata- rata	A+	A-	B+	B-	BKA	BKB
	Xi	Fi	Xi-Fi								
1	624	610	14		13.21672	23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
2	600	611.4	-11.4	25.4		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
3	612	610.26	1.74	13.14		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
4	612	610.434	1.566	0.174		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
5	624	610.5906	13.4094	11.8434		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
6	588	611.9315	-23.9315	37.34094		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
7	600	609.5384	-9.53839	14.393154		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
8	612	608.5845	3.415453	12.953839		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
9	612	608.9261	3.073907	0.3415453		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
10	624	609.2335	14.76652	11.692609		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
11	600	610.7101	-10.7101	25.476652		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
12	588	609.6391	-21.6391	10.928986		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
13	600	607.4752	-7.47521	14.163912		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
14	612	606.7277	5.272312	12.747521		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
15	612	607.2549	4.74508	0.5272312		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
16	624	607.7294	16.27057	11.525492		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
17	624	609.3565	14.64352	1.6270572		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
18	636	610.8208	25.17916	10.535648		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
19	600	613.3388	-13.3388	38.517916		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
20	612	612.0049	-0.00488	13.333875		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
21	612	612.0044	-0.00439	0.0004877		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
22	624	612.004	11.99605	12.000439		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
23	612	613.2036	-1.20356	13.199605		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
24	624	613.0832	10.9168	12.120356		23.3936	-23.3936	11.76288	-11.7629	35.15649	-35.1565
Jumlah				303.98467							

1. Grafik Tracking Signal dan Moving Range Chart Dealer ACE Hardware

- Tracking Signal

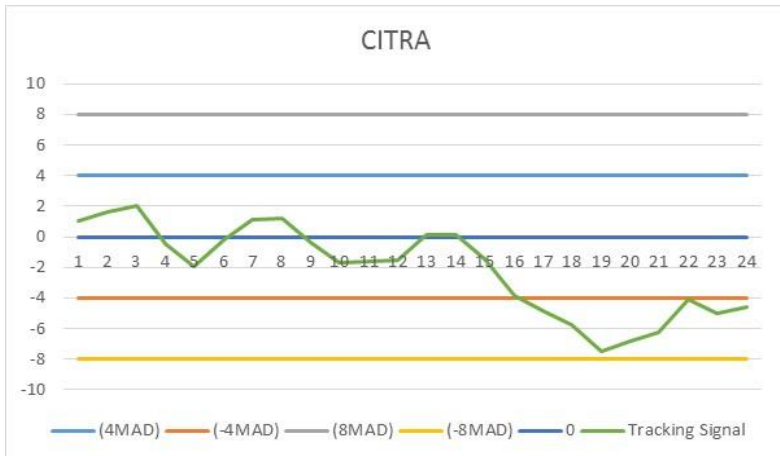


- Moving Range Chart

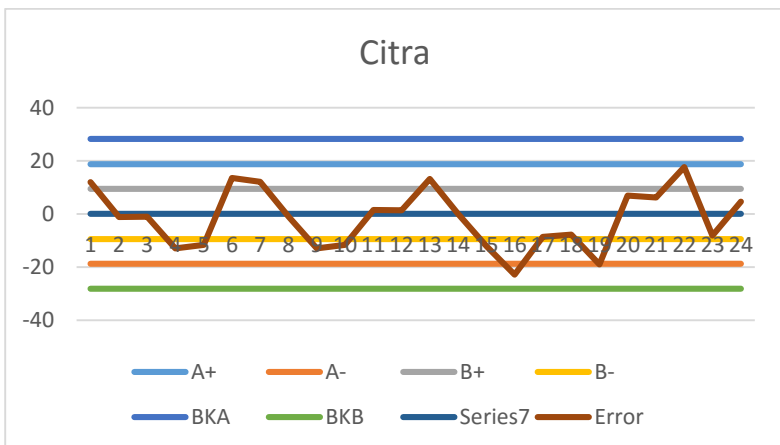


2. Perhitungan Tracking Signal dan Moving Range Chart Dealer Citra

- Tracking Signal

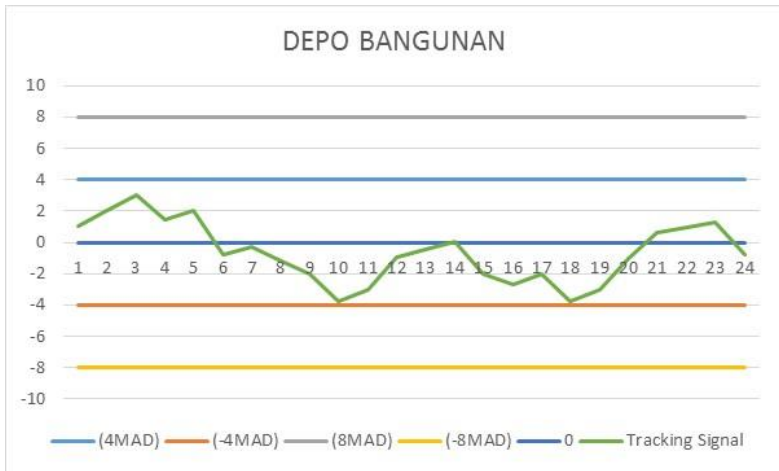


- Moving Range Chart

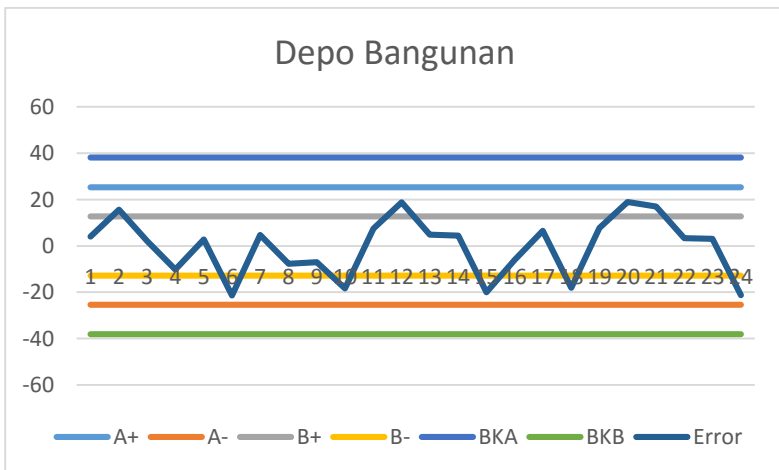


3. Perhitungan Tracking Signal dan Moving Range Chart Dealer Depo Bangunan

- Tracking Signal

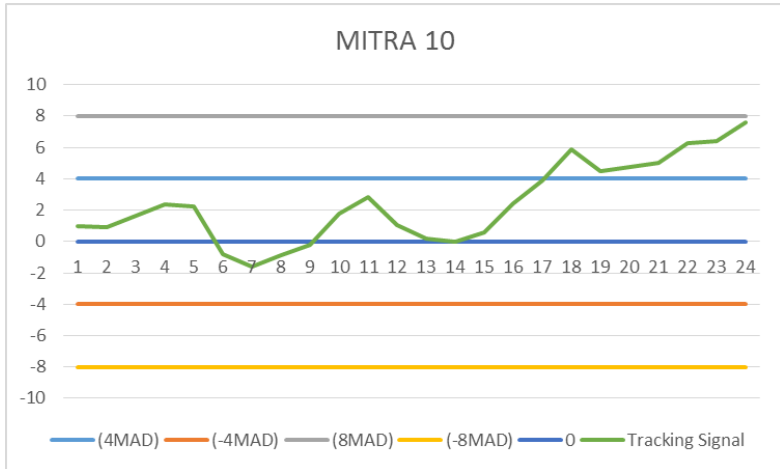


- Moving Range Chart

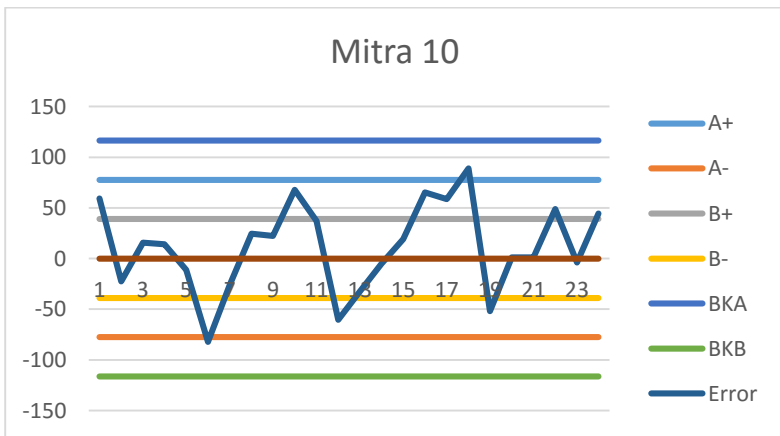


4. Perhitungan Tracking Signal dan Moving Range Chart Dealer Mitra 10

- Tracking Signal

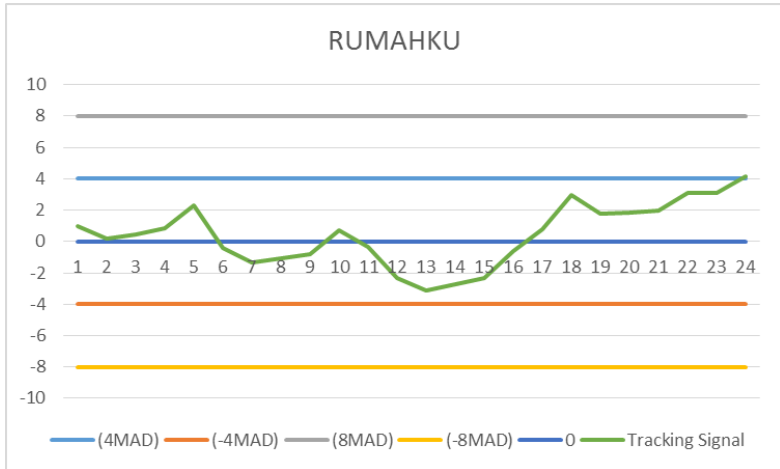


- Moving Range Chart

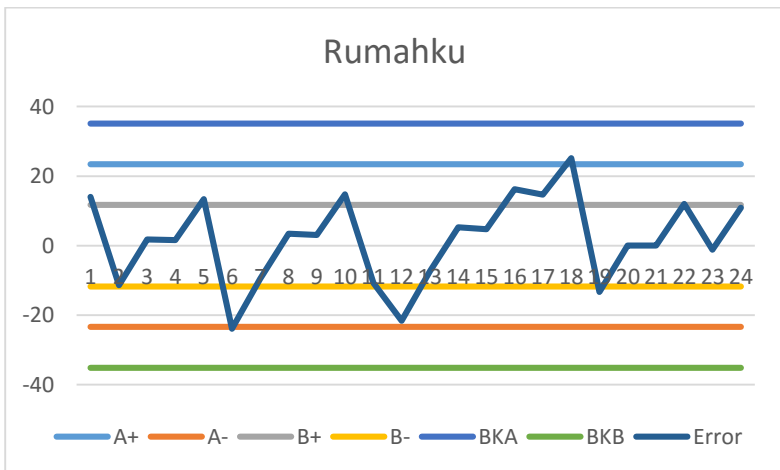


5. Perhitungan Tracking Signal dan Moving Range Chart Dealer Rumahku

- Tracking Signal



- Moving Range Chart



Logika Distribution Requirement Planning Dealer ACE Hardware Periode Bulan November 2015-Oktober 2016

Dealer ACE Hardware														
Kebijakan Pemesanan : DRP/EOQ							Safety Stock : 24 Unit							
Lead Time : 1 Bulan							EOQ : 3168 Unit							
Ket.	Periode												Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11		12
GR		1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	18996 Pcs
SR		3168												
POH	96	1681	98	1683	100	1685	102	1687	104	1689	106	1691	108	10830 Pcs
NR		1487		1485		1483		1481		1479		1477		8892 Pcs
Po Rec		3168		3168		3168		3168		3168		3168		6 Kali
Po Rel			3168		3168		3168		3168		3168			15840

Biaya distribusi produk CW 421 J untuk dealer ACE Hardware dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 6 x Rp 12.060.000,-
 = Rp 72.360.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 10830 x Rp 3.780,-
 = Rp 40.937.400,-

Total Biaya Distribusi = Rp 72.360.000,- + Rp 40.937.400,-
 = **Rp 113.297.400,-**

Logika *Distribution Requirement Planning Dealer* Citra Periode Bulan November 2015-Oktober 2016

Dealer Citra														
Kebijakan Pemesanan : DRP/EOQ							Safety Stock : 14 Unit							
Lead Time : 1 Bulan							EOQ : 1092 Unit							
Ket.	Periode												Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11		12
GR		536	536	536	536	536	536	536	536	536	536	536	536	6432 Pcs
SR		1092												
POH	228	784	248	804	268	824	288	844	308	864	328	884	348	7020Pcs
NR		308		288		268		248		228		208		1548Pcs
Po Rec		1092		1092		1092		1092		1092		1092		6 Kali
Po Rel			1092		1092		1092		1092		1092			5460

Biaya distribusi produk CW 421 J untuk *dealer* Citra dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 6 x Rp 4.210.000,-
 = Rp 25.260.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 7020 x Rp 3.780,-
 = Rp 26.535.600,-

Total Biaya Distribusi = Rp 25.260.000,- + Rp 26.535.600,-
 = **Rp 51.795.600,-**

Logika *Distribution Requirement Planning Dealer* Depo Bangunan Periode Bulan November 2015-Oktober 2016

Dealer Depo Bangunan														
Kebijakan Pemesanan : DRP/EOQ							Safety Stock : 16 Unit							
Lead Time : 1 Bulan							EOQ : 1320 Unit							
Ket.	Periode												Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11		12
GR		643	643	643	643	643	643	643	643	643	643	643	643	7716Pcs
SR		1320												1320Pcs
POH	408	1085	442	1119	476	1153	510	1187	544	1221	578	1255	612	10590Pcs
NR		235		201		167		133		99		65		900Pcs
Po Rec		1320		1320		1320		1320		1320		1320		6 Kali
Po Rel			1320		1320		1320		1320		1320			6600Pcs

Biaya distribusi produk CW 421 J untuk *dealer* Depo Bangunan dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 6 x Rp 5,210,000 ,-
 = Rp 31.260.000 ,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 10590 x Rp 3.780,-
 = Rp 40.030.200,-

Total Biaya Distribusi = Rp 31.260.000 ,- + Rp 40.030.200,-
 = **Rp 71.290.200,-**

Logika *Distribution Requirement Planning Dealer* Mitra 10 Periode Bulan November 2015-Oktober 2016

Dealer Mitra 10														
Kebijakan Pemesanan : DRP/EOQ							Safety Stock : 56 Unit							
Lead Time : 1 Bulan							EOQ : 4968 Unit							
Ket.	Periode												Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11		12
GR		2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	29472 Pcs
SR		4968												4968 Pcs
POH	870	3382	926	3438	982	3494	1038	3550	1094	3606	1150	3662	1206	28398 Pcs
NR		1586		1530		1474		1418		1362		1306		8676 Pcs
Po Rec		4968		4968		4968		4968		4968		4968		6 Kali
Po Rel			4968		4968		4968		4968		4968			24840 Pcs

Biaya distribusi produk CW 421 J untuk *dealer* Mitra 10 dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 6 x Rp 19.060.000,-
 = Rp 114.360.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 28398 x Rp 3.780,-
 = Rp 107.344.440,-

Total Biaya Distribusi = Rp 114.360.000,- Rp 107.344.440,-
 = **Rp 221.704.440,-**

Logika *Distribution Requirement Planning Dealer* Rumahku Periode Bulan November 2015-Oktober 2016

Dealer Rumahku														
Kebijakan Pemesanan : DRP/EOQ							Safety Stock : 16 Unit							
Lead Time : 1 Bulan							EOQ : 1236 Unit							
Ket.	Periode												Jumlah	
	0	1	2	3	4	5	6	7	8	9	10	11		12
GR		614	614	614	614	614	614	614	614	614	614	614	614	7368 Pcs
SR		1236												1236 Pcs
POH	144	766	152	774	160	782	168	790	176	798	184	806	192	5892 Pcs
NR		470		462		454		446		438		430		2700 Pcs
Po Rec		1236		1236		1236		1236		1236		1236		6 Kali
Po Rel			1236		1236		1236		1236		1236			6180Pcs

Biaya distribusi produk CW 421 J untuk *dealer* Rumahku dengan menggunakan metode DRP yaitu.

Biaya Pengiriman = Frekuensi Pengiriman x Harga/kirim
 = 6 x Rp 4.780.000,-
 = Rp 28.680.000,-

Biaya Penyimpanan = Jumlah Persediaan x Biaya Simpan/Bulan
 = 5892 x Rp 3.780,-
 = Rp 22.271.760,-

Total Biaya Distribusi = Rp 28.680.000,- + Rp 22.271.760,-
 = **Rp 50.951.760,-**