



# Laboratuvar 01

## *BİL 210-Olasılık ve İstatistik*

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### *Minitab Ortamının Tanıtılması*

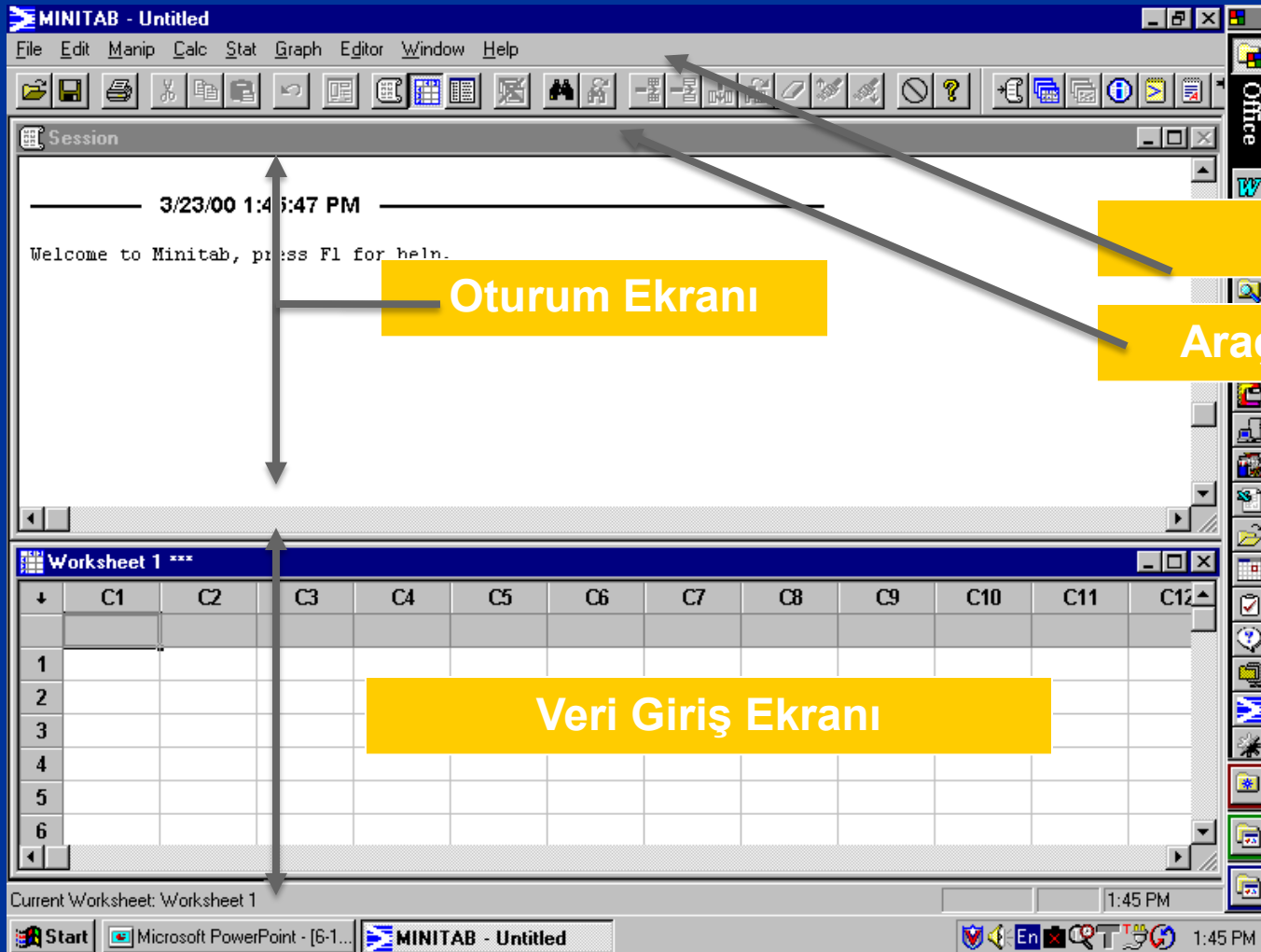
# MINITAB Nedir?

- İstatistiksel analiz yapmaya yarayan bir paket program.
- Minitab Inc. Firması tarafından geliştirilmiştir.
- Minitab'ın **üç ana bölümü**
  1. Veri Giriş Ekranı
  2. Komut satırı
  3. Menü

# MINITAB Nedir?

- Menüdeki işlemlerin tümü, komut satırına yazılan komutlar ile de gerçekleştirilebilmektedir.
- Komut satırını açmak için, “Editor->Enable Commands” adımlarının izlenmesi gerekmektedir.

# MINITAB Ekranı



# Veri Giriş Ekranı

MINITAB - Untitled

File Edit Manip Calc Stat Graph Editor Window Help

Session

3/23/00 1:45:47 PM

Metin Sütunu C1-T  
(-T ile belirtilmiş)

Tarih Sütunu C2-D  
(-D ile belirtilmiş)

Worksheet \*\*\*

	C1-T	C2-D	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
	Type	Date	Count	Amount								
1	T1	3/20/00	2	7								
2	T2	3/21/00	4	5								
3	T3	3/22/00	5	8								
4	T4	3/23/00	3	3								
5												
6												

Sayısal Sütun C3  
(Özel bir belirtim yok)

Current Worksheet: Worksheet 1

Start Microsoft PowerPoint - [6-1...] MINITAB - Untitled

1:52 PM

# Veri Giriş Ekranı

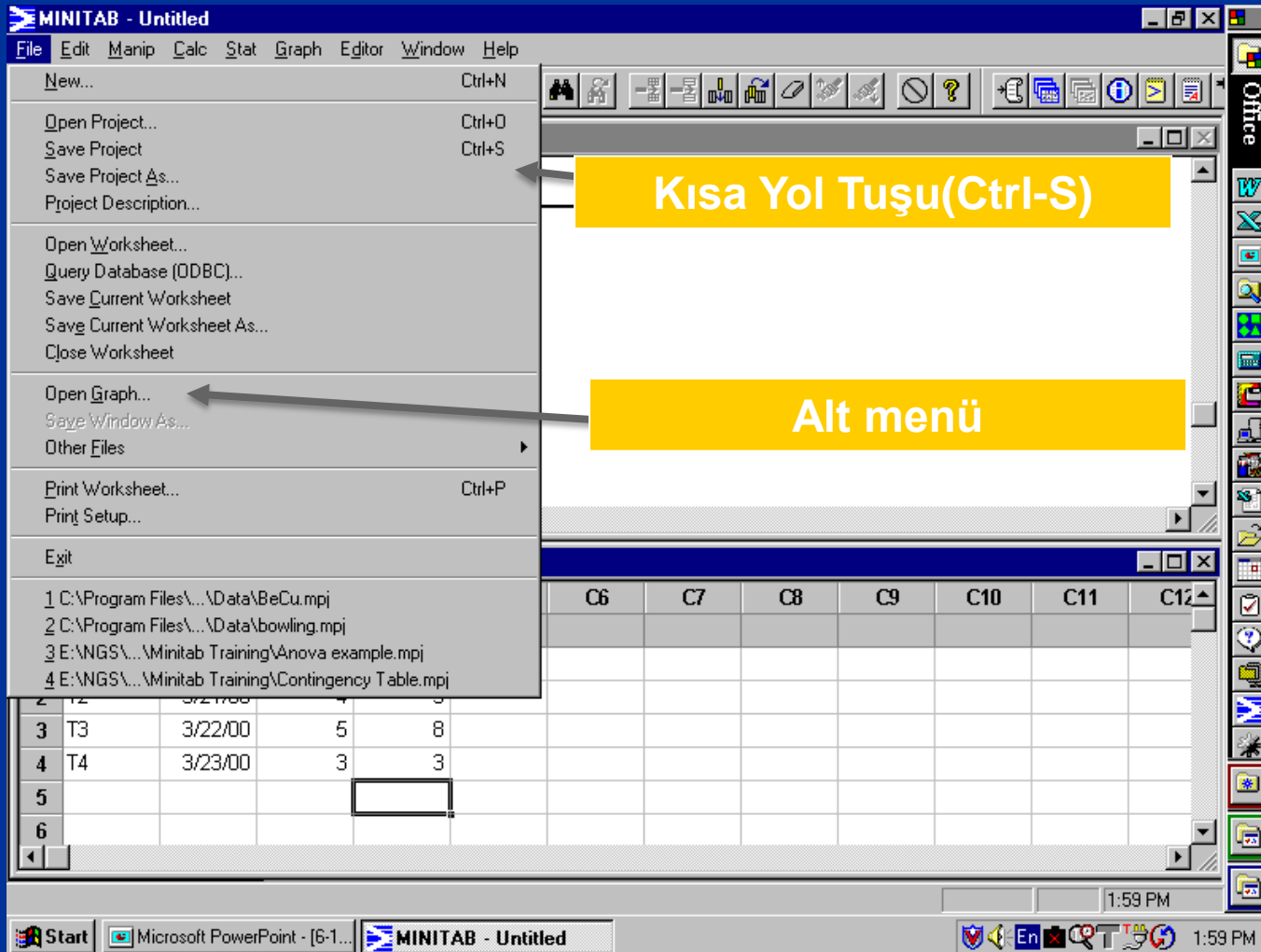
**Veri Giriş Oku**

**Sütun İsimleri**  
(Tip, Tarih, Sayı & Miktar)

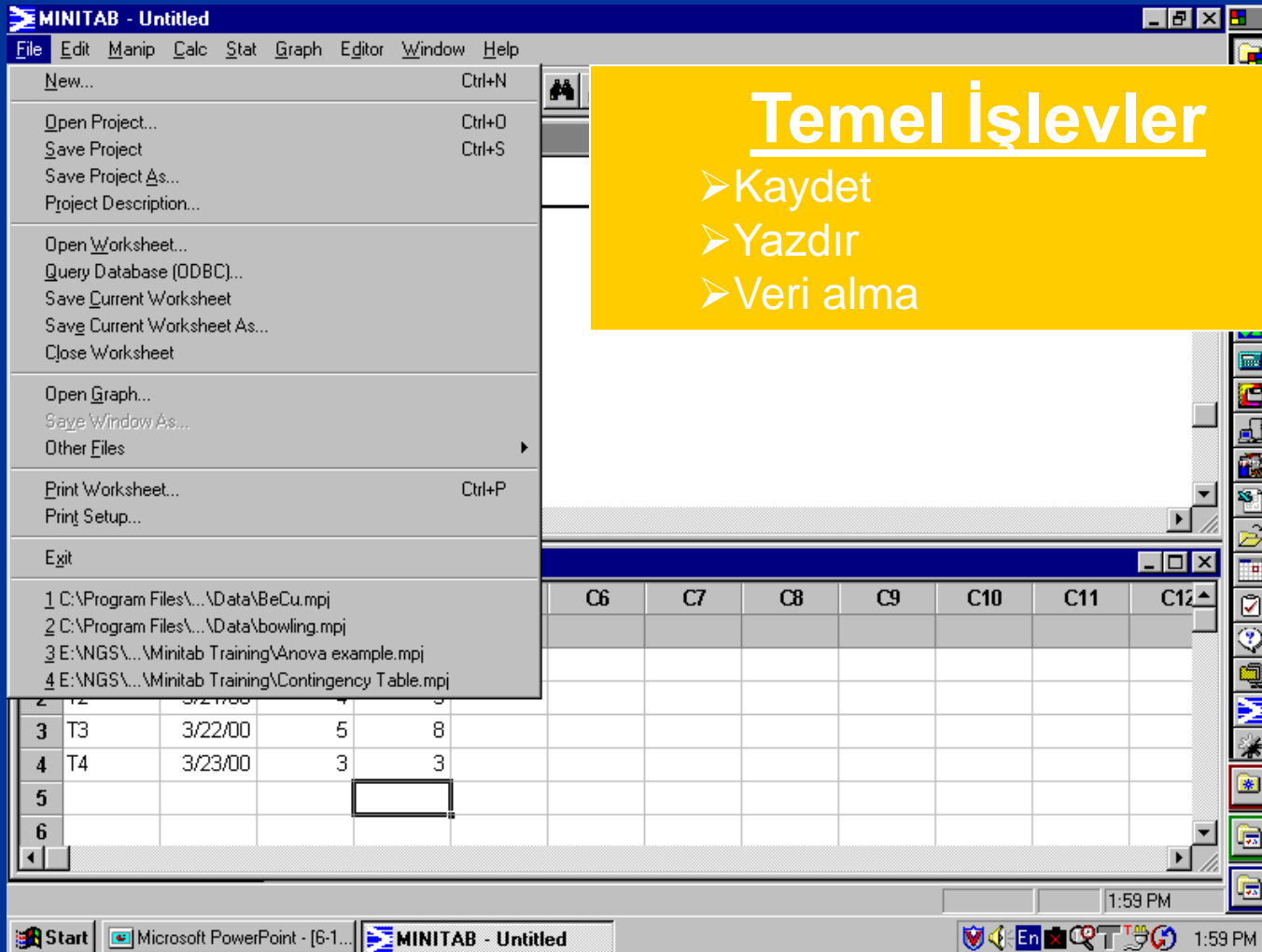
**Veri Satırları**

	C1-T	C2-D	C3	C4	C5	C6	C7
	Type	Date	Count	Amount			
1	T1	3/20/00	2	7			
2	T2	3/21/00	4	5			
3	T3	3/22/00	5	8			
4	T4	3/23/00	3	3			
5							
6							

# Menü



# Menü-Dosya İşlemleri





# Menü-Düzenleme İşlemleri

The screenshot displays the Minitab software interface. The 'Edit' menu is open, showing options such as 'Undo typing "3" in R4 x C4', 'Clear Cells', 'Delete Cells', 'Copy Cells', 'Cut Cells', 'Paste Cells', 'Paste Link', 'Links', 'Select All Cells', 'Edit Last Dialog', 'Command Line Editor', and 'Preferences...'. The worksheet 'Worksheet 1 \*\*\*' is visible, containing a table with columns C1-T, C2-D, C3, C4, C5, C6, C7, C8, C9, C10, C11, and C12. The data in the table is as follows:

	C1-T	C2-D	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
	Type	Date	Count	Amount								
1	T1	3/20/00	2	7								
2	T2	3/21/00	4	5								
3	T3	3/22/00	5	8								
4	T4	3/23/00	3	3								
5												
6												

The taskbar at the bottom shows the Start button, Microsoft PowerPoint - [6-1...], and Minitab - Untitled. The system clock indicates 2:15 PM.

## Temel İşlevler

- Seç
- Sil
- Kopyala
- Yapıştır
- Dinamik Bağlantılar

# Menü-Veri İşleme İşlemleri

The screenshot shows the Minitab software interface. The 'Manip' menu is open, displaying options such as 'Subset Worksheet...', 'Split Worksheet...', 'Merge Worksheets...', 'Copy Columns...', 'Unstack Columns...', 'Stack', 'Transpose Columns...', 'Sort...', 'Rank...', 'Delete Rows...', 'Erase Variables...', 'Concatenate...', 'Code', 'Change Data Type', and 'Display Data...'. Below the menu, a worksheet titled 'Worksheet 1 \*\*\*' is visible, containing a table with columns C1-T, C2-D, C3, C4, C5, C6, C7, C8, C9, C10, C11, and C12. The data is as follows:

	C1-T	C2-D	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
	Type	Date	Count	Amount								
1	T1	3/20/00	2	7								
2	T2	3/21/00	4	5								
3	T3	3/22/00	5	8								
4	T4	3/23/00	3	3								
5												
6												

The task list on the right side of the slide includes:

- Alt Küme/Böl
- Sırala
- Derecelendir
- Satır verisi işleme
- Sütun verisi işleme

# Menü-Hesaplama İşlemleri

The screenshot displays the MINITAB software interface. The 'Calc' menu is open, showing various calculation options. Below the menu, a worksheet titled 'Worksheet 1 \*\*\*' is visible, containing a table with data. The table has columns labeled C1-T, C2-D, C3, C4, C5, C6, C7, C8, C9, C10, C11, and C12. The data rows are numbered 1 through 6. The status bar at the bottom shows the time as 2:19 PM.

**MINITAB - Untitled**

File Edit Manip **Calc** Stat Graph Editor Window Help

Session

Welcome to M

**Worksheet 1 \*\*\***

	C1-T	C2-D	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
	Type	Date	Count	Amount								
1	T1	3/20/00	2	7								
2	T2	3/21/00	4	5								
3	T3	3/22/00	5	8								
4	T4	3/23/00	3	3								
5												
6												

Start Microsoft PowerPoint - [6-1...] MINITAB - Untitled 2:19 PM

## Temel İşlevler

- Sütun Hesaplamaları
- Satır/Sütun istatistikleri
- Veri standardizasyonu
- Veri çekme
- Veri oluşturma

# Menü- İstatistiksel İşlemleri

The screenshot displays the MINITAB software interface. The 'Stat' menu is open, showing options like Basic Statistics, Regression, ANOVA, DOE, Control Charts, Quality Tools, Reliability/Survival, Multivariate, Time Series, Tables, Nonparametrics, EDA, and Power and Sample Size. The main window shows 'Worksheet 1' with a table of data. The table has columns for Type, Date, Count, and Amount. The data rows are as follows:

	C1-T Type	C2-D Date	C3 Count	C4 Amount
1	T1	3/20/00	2	7
2	T2	3/21/00	4	5
3	T3	3/22/00	5	8
4	T4	3/23/00	3	3
5				
6				

The taskbar at the bottom shows the Start button, Microsoft PowerPoint - [6-1..., and MINITAB - Untitled. The system clock indicates 2:20 PM.

# Menü- Grafik İşlemleri

The screenshot displays the Minitab software interface. The 'Graph' menu is open, showing various plotting options. Below the menu, a worksheet titled 'Worksheet 1 \*\*\*' is visible, containing a table of data. The table has columns for 'C1-T Type', 'C2-D Date', 'C3-Count', and 'C4-Amount'. The data rows are as follows:

	C1-T Type	C2-D Date	C3-Count	C4-Amount
1	T1	3/20/00	2	7
2	T2	3/21/00	4	5
3	T3	3/22/00	5	8
4	T4	3/23/00	3	3
5				
6				

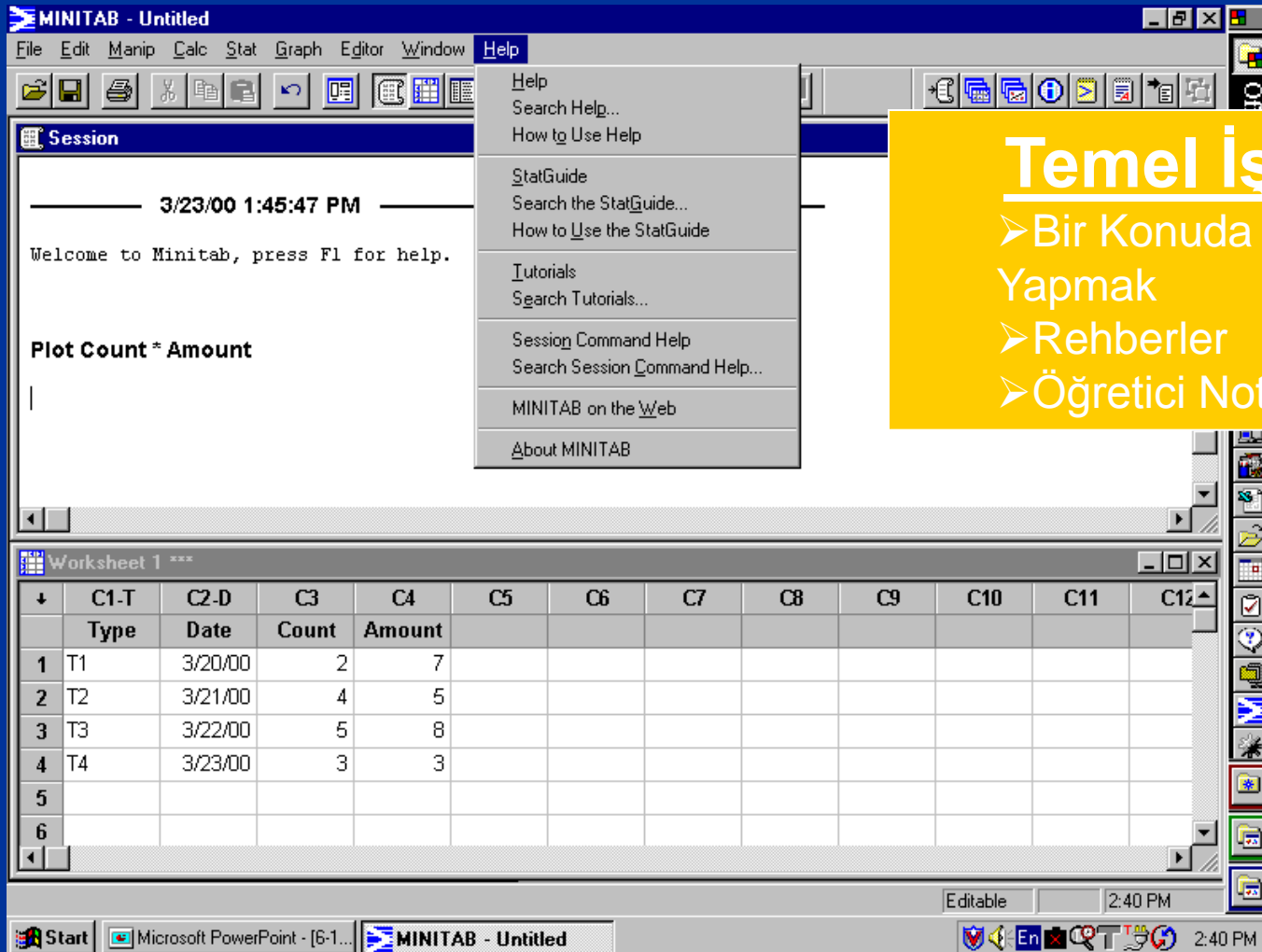
The 'Graph' menu options include: Layout..., Plot..., Time Series Plot..., Chart..., Histogram..., Boxplot..., Matrix Plot..., Draftsman Plot..., Contour Plot..., 3D Plot..., 3D Wireframe Plot..., 3D Surface Plot..., Dotplot..., Pie Chart..., Marginal Plot..., Probability Plot..., Stem-and-Leaf..., and Character Graphs.

The status bar at the bottom shows 'Editable' and '2:22 PM'. The taskbar at the very bottom includes the Start button, 'Microsoft PowerPoint - [6-1...]', and 'MINITAB - Untitled'.

## Temel İşlevler

- Scatter Plot
- Trend Plot
- Box Plot
- Contour/3 D plotting
- Dot Plots
- Probability Plots
- Stem & Leaf Plots

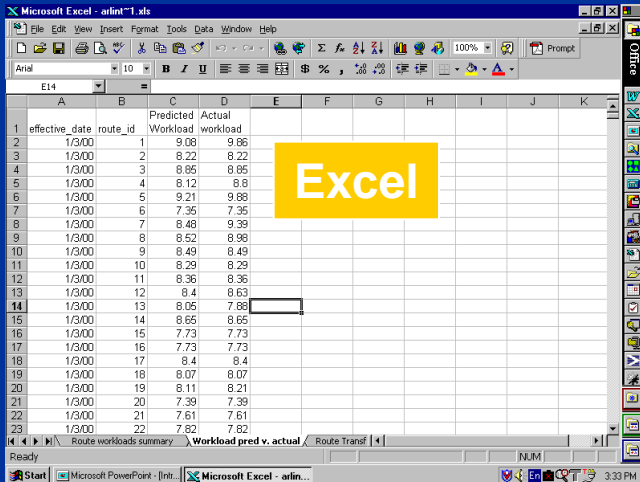
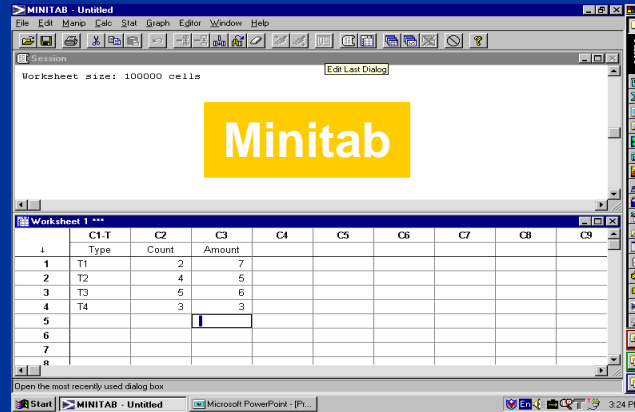
# Menü- Yardım İşlemleri



## Temel İşlevler

- Bir Konuda Arama Yapmak
- Rehberler
- Öğretici Notlar

# Birlikte Çalışılabilirlik



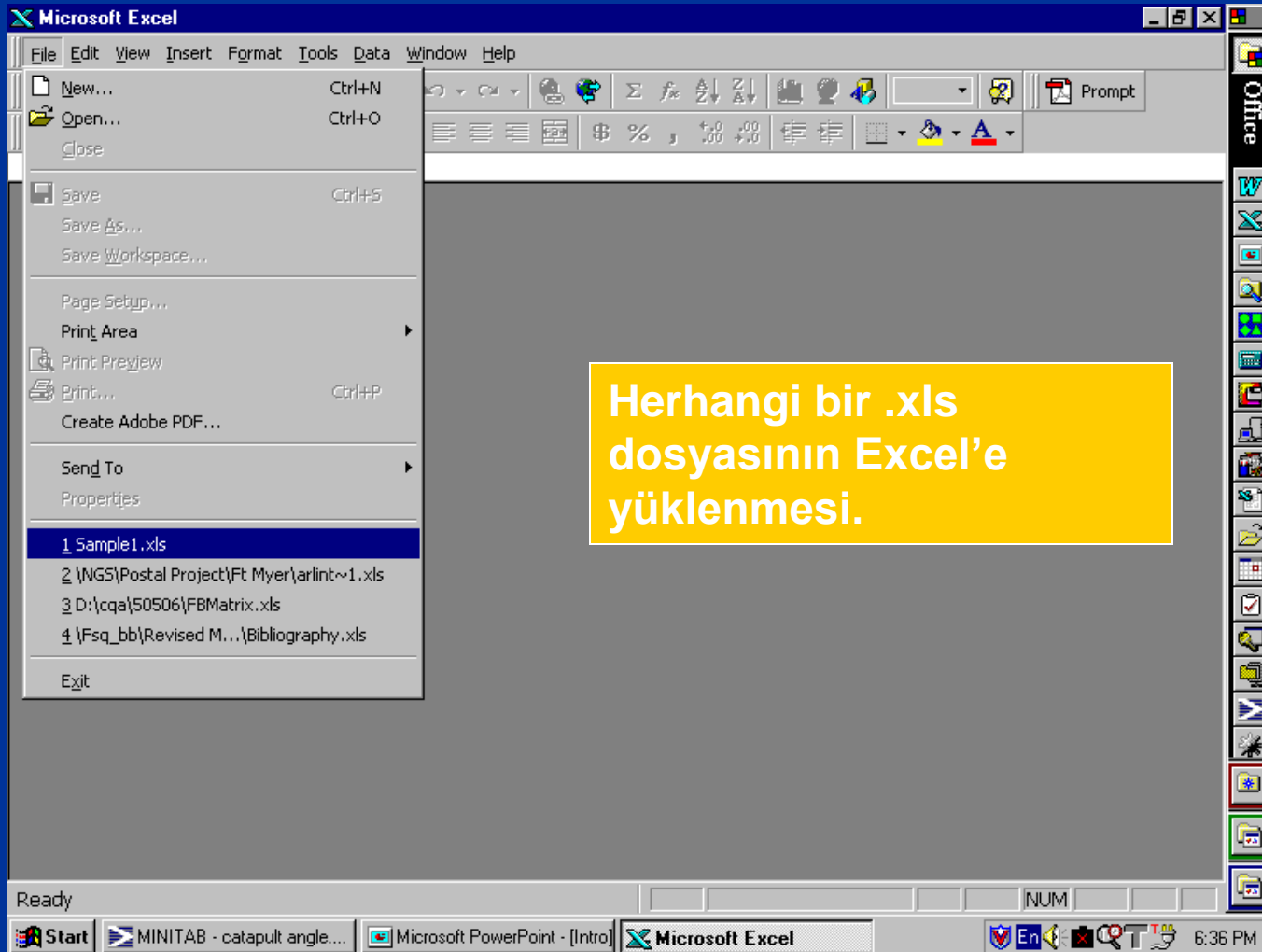
Laboratuvar 01

**PowerPoint**

*Istatistik*

*Minitab Ortamının Tanıtılması*

# Birlikte Çalışılabilirlik





# Birlikte Çalışılabilirlik

Microsoft Excel - arlint~1.xls

File Edit View Insert Format Tools Data Window Help

100% Prompt

Arial 10 B I U

E14

	A	B	C	D	E	F	G	H	I	J	K
1	effective_date	route_id	Predicted Workload	Actual workload							
2	1/3/00	1	9.08	9.86							
3	1/3/00	2	8.22	8.22							
4	1/3/00	3	8.85	8.85							
5	1/3/00	4	8.12	8.8							
6	1/3/00	5	9.21	9.88							
7	1/3/00	6	7.35	7.35							
8	1/3/00	7	8.48	9.39							
9	1/3/00	8	8.52	8.98							
10	1/3/00	9	8.49	8.49							
11	1/3/00	10	8.29	8.29							
12	1/3/00	11	8.36	8.36							
13	1/3/00	12	8.4	8.63							
14	1/3/00	13	8.05	7.88							
15	1/3/00	14	8.65	8.65							
16	1/3/00	15	7.73	7.73							
17	1/3/00	16	7.73	7.73							
18	1/3/00	17	8.4	8.4							
19	1/3/00	18	8.07	8.07							
20	1/3/00	19	8.11	8.21							
21	1/3/00	20	7.39	7.39							
22	1/3/00	21	7.61	7.61							
23	1/3/00	22	7.82	7.82							

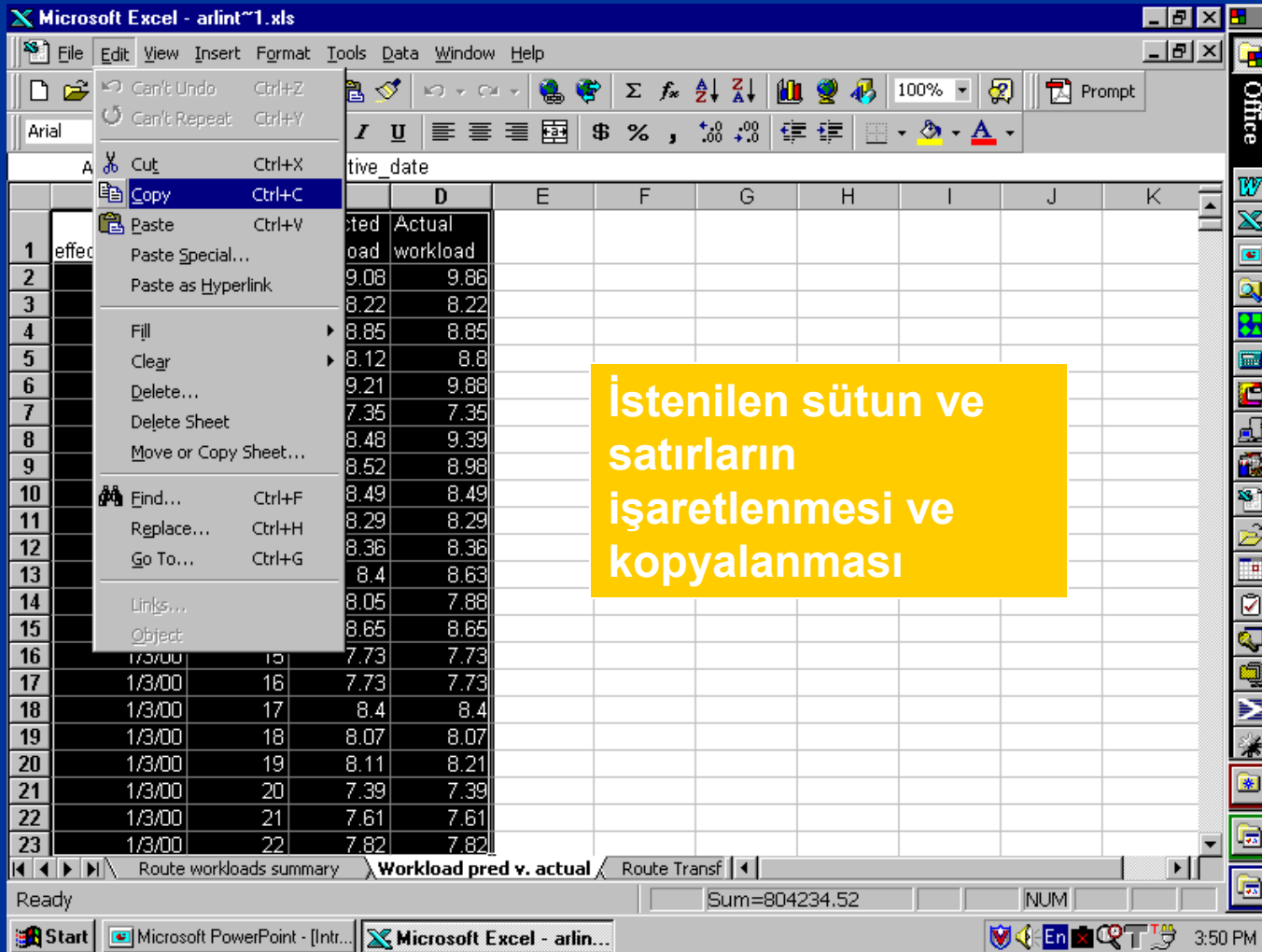
Veri Excel'e yüklendi.

Route workloads summary Workload pred v. actual Route Transf

Ready NUM

Start Microsoft PowerPoint - [Intr... Microsoft Excel - arlin... 3:46 PM

# Birlikte Çalışılabilirlik

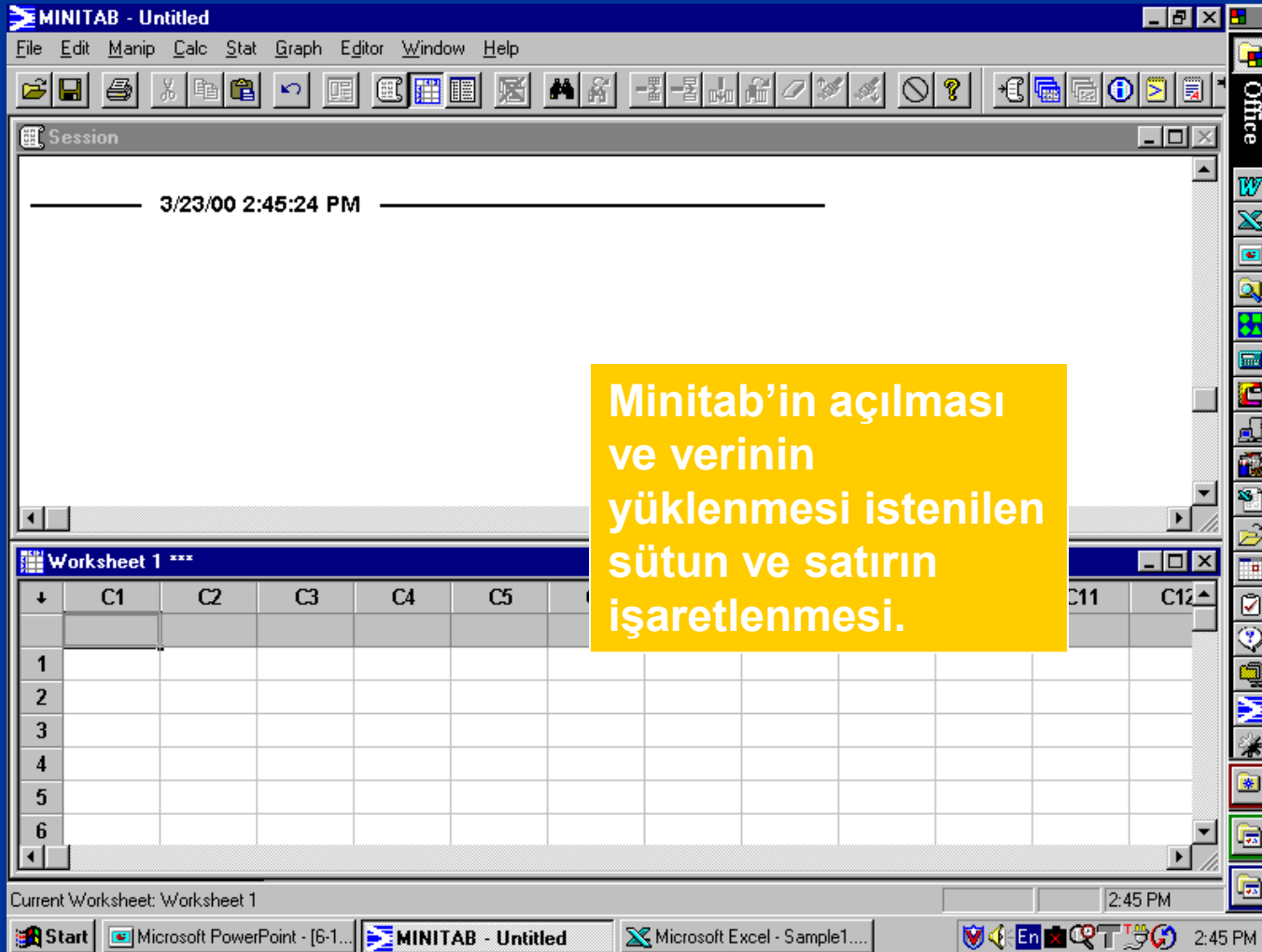


The screenshot shows the Microsoft Excel interface with the 'Edit' menu open. The 'Copy' option is highlighted. A yellow text box is overlaid on the spreadsheet, containing the text 'İstenilen sütun ve satırların işaretlenmesi ve kopyalanması'. The spreadsheet displays a table with columns 'Actual' and 'workload' and rows of data. The status bar at the bottom shows 'Sum=804234.52' and 'NUM'.

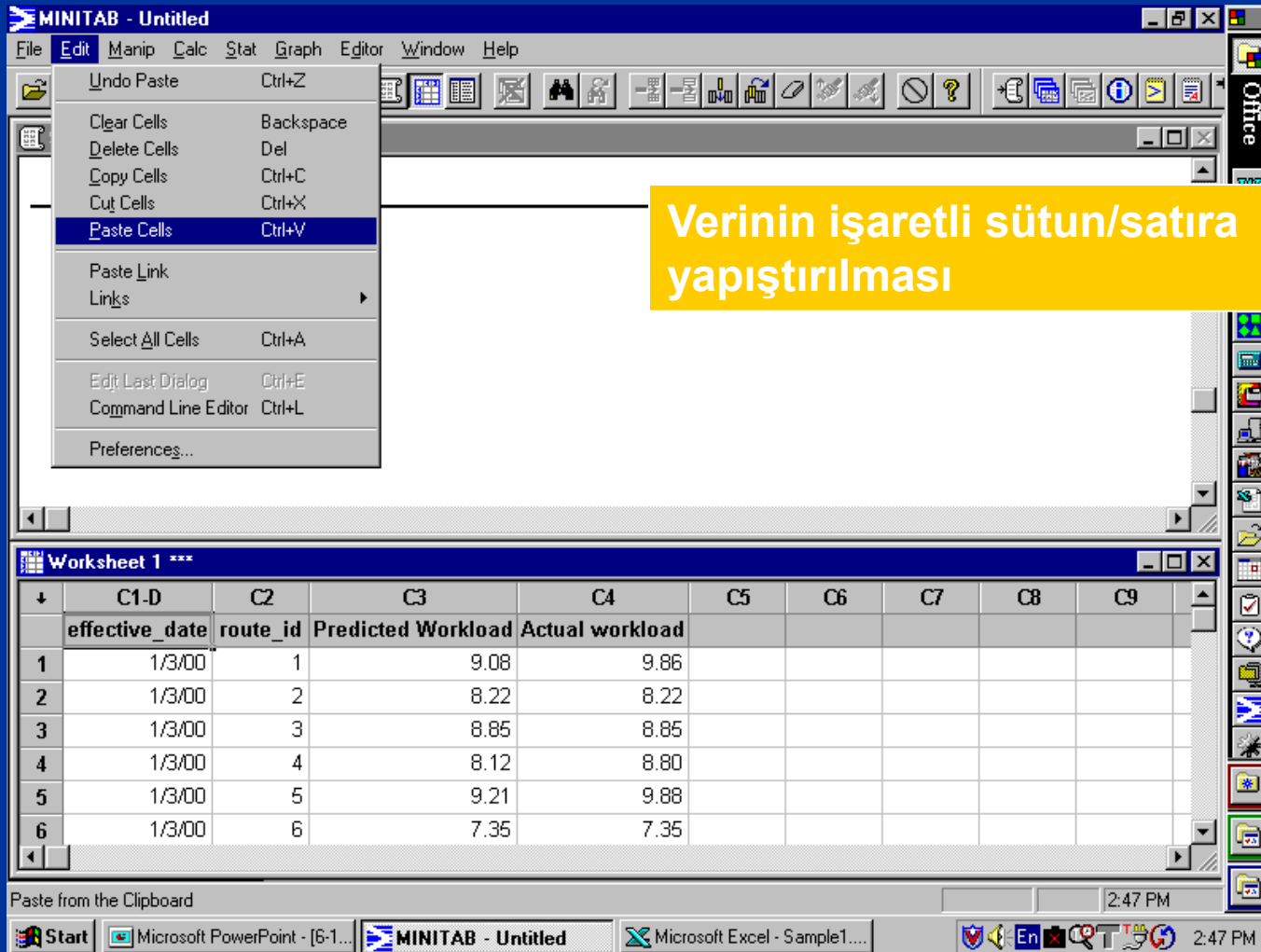
İstenilen sütun ve satırların işaretlenmesi ve kopyalanması

	Actual	workload
1	9.08	9.86
2	8.22	8.22
3	8.85	8.85
4	8.12	8.8
5	9.21	9.88
6	7.35	7.35
7	8.48	9.39
8	8.52	8.98
9	8.49	8.49
10	8.29	8.29
11	8.36	8.36
12	8.4	8.63
13	8.05	7.88
14	8.65	8.65
15	7.73	7.73
16	7.73	7.73
17	8.4	8.4
18	8.07	8.07
19	8.11	8.21
20	7.39	7.39
21	7.61	7.61
22	7.82	7.82

# Birlikte Çalışılabilirlik



# Birlikte Çalışılabilirlik



Verinin işaretli sütun/satıra yapıştırılması

	C1-D	C2	C3	C4	C5	C6	C7	C8	C9
	effective_date	route_id	Predicted Workload	Actual workload					
1	1/3/00	1	9.08	9.86					
2	1/3/00	2	8.22	8.22					
3	1/3/00	3	8.85	8.85					
4	1/3/00	4	8.12	8.80					
5	1/3/00	5	9.21	9.88					
6	1/3/00	6	7.35	7.35					

Paste from the Clipboard

2:47 PM

Start Microsoft PowerPoint - [6-1...] MINITAB - Untitled Microsoft Excel - Sample1.... 2:47 PM