



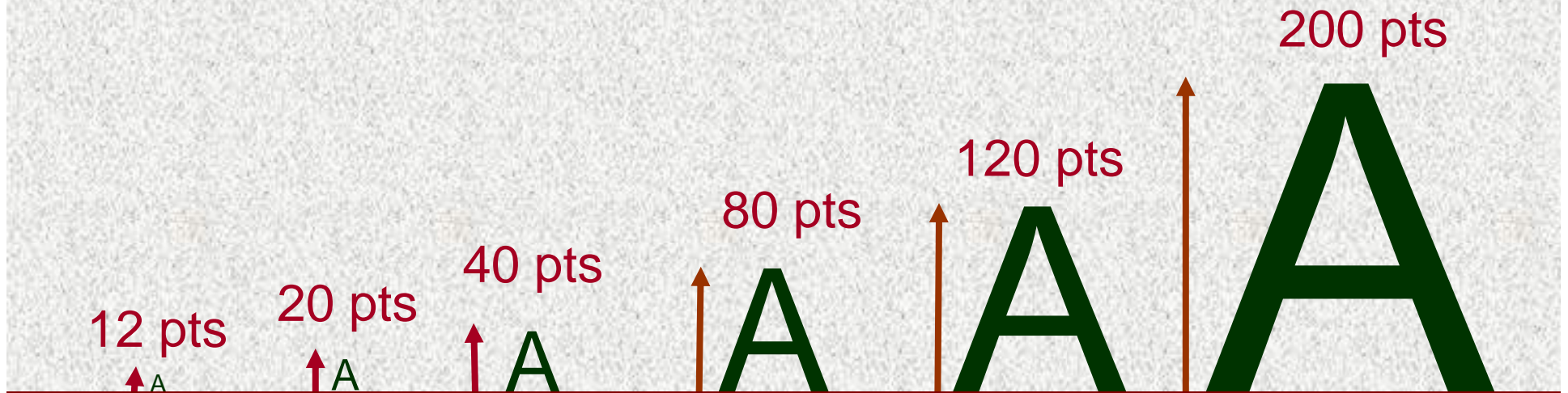
# **Nature of Computing**

## **Chapter 5**

### **Productivity Applications**

# Word Processing: Fonts

- point size: a measure of character size
  - there are 72 points in an inch



# Word Processing: Fonts

- serif font: letters have fine lines (serifs) at the ends of the main strokes
  - the eye reads over these fonts more quickly
  - best for paragraphs, letters blend together more
- sans-serif font: letters have no serifs at the ends of the main strokes
  - best for titles, letters stand out more

Times New Roman: Serif Font

Arial: Sans-serif Font

- monospaced font: all the letters occupy the same width
- proportionally spaced font: wide letters occupy more room than narrow letters

Arial (proportional)

WWWWWWWWWWWW

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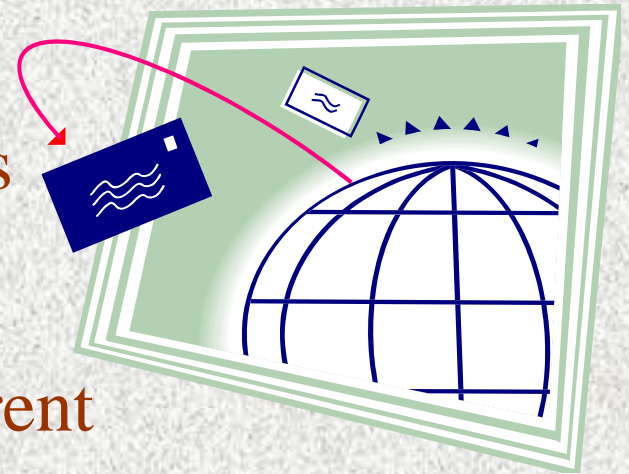
Courier New (monospace)

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# Word Processing: Productivity Features

- justification: the alignment of text on a page
  - left, right, centered
- style: a named set of formatting features which can be applied to text
- section: a portion of text to which different page formatting features can be applied
- mail merge: a tools which creates a series of personalized documents by repeatedly inserting a list of names into a master document
- template: a master document with text and settings already set up which can be copied and modified to make new documents



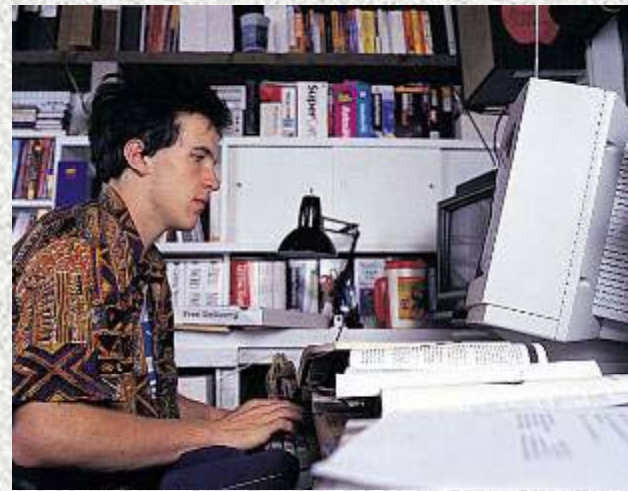
# DTP & PDF

## ➤ DTP: Desktop Publishing

- producing publications intended for printing

## ➤ PDF: Portable Document Format

- electronic documents which model paper forms and documents

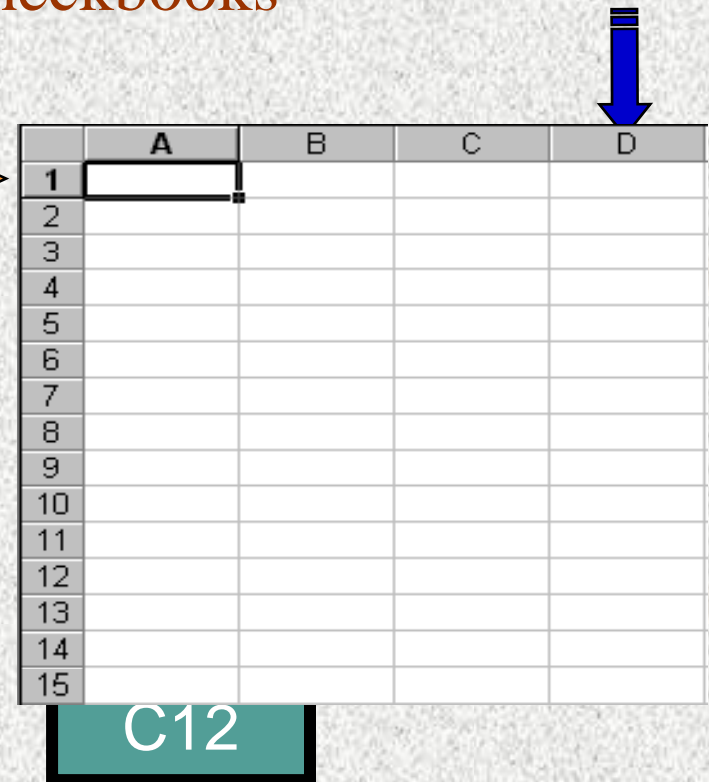


# The Spreadsheet

- Spreadsheet: software to process numbers
  - budgeting, business projections, financial planning
  - grade books, scientific simulations, checkbooks

## The Malleable Matrix

- ✓ The spreadsheet consists of:
  - Cells: the intersection of a row and column
- ✓ Each cell has an Address:
  - a column letter and row number
  - e.g.: A1, C12



	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

# The Spreadsheet

Each cell can contain a:

- ✓ **Value:** a number (including %'s, dates, etc.)
- ✓ **Label:** text (words, names, column headers, etc.)
- ✓ **Formula:** performs calculations on values (and labels)

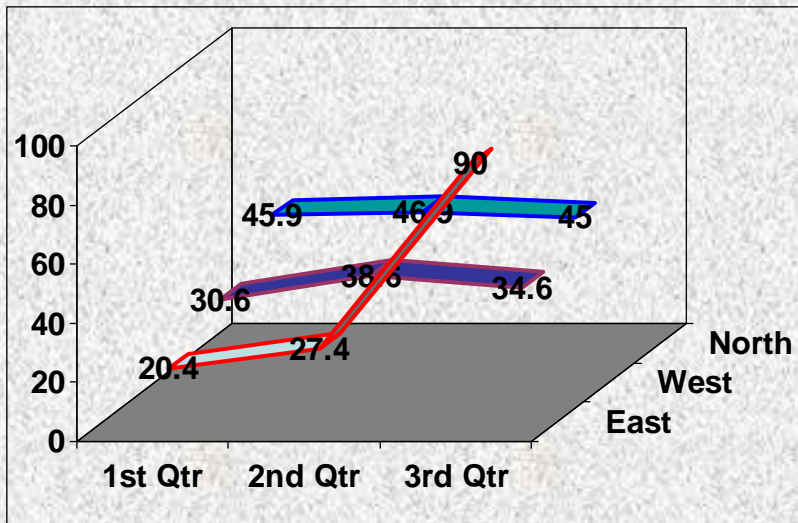
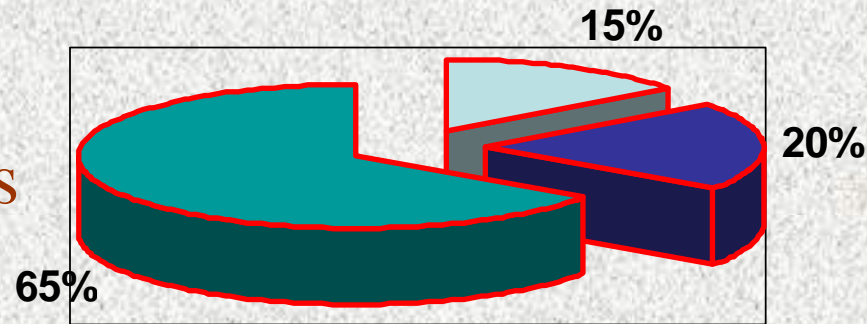
A formula can contain **functions** (predefined operations such as **AVERAGE** and **MAX**)

	A	B	C	D	E	F	G
1	<b>The Smart Company</b>						
2	Payroll for the period ending						07-Nov-93
3							
4	NUM	FIRST	LAST	EMP#	DIVISION	DATE of HIRE	HOURLY RATE
5	1	Tom	Jones	GW29	Germany	19-Dec-88	\$12.50
6	2	Sean	Morris	GBW09	Great Britain	05-Jul-88	\$13.30
7	3	Colleen	Wilson	CW58	Canada	26-Jul-90	\$16.75
8	4	Feri	Smith	AW55	Australia	07-Jun-88	\$8.75
9	5	Frank	Connors	GBC07	Great Britain	12-Jul-83	\$12.60
10	6	Kirsten	Able	GBS45	Great Britain	05-Jun-87	\$24.00
11	7	Joseph	Califano	CW19	Canada	26-Feb-89	\$12.10
12	8	Sue	Bally	GCD4	Germany	15-Apr-83	\$21.50
13	9	Cheryl	Halal	CA26	Canada	01-Feb-90	\$13.30

5	PPE	135	120
6	IDI	65	88
7	CUC	29	16
8			
9	Totals	=B5+B6-B7	=SUM(C5:C7)

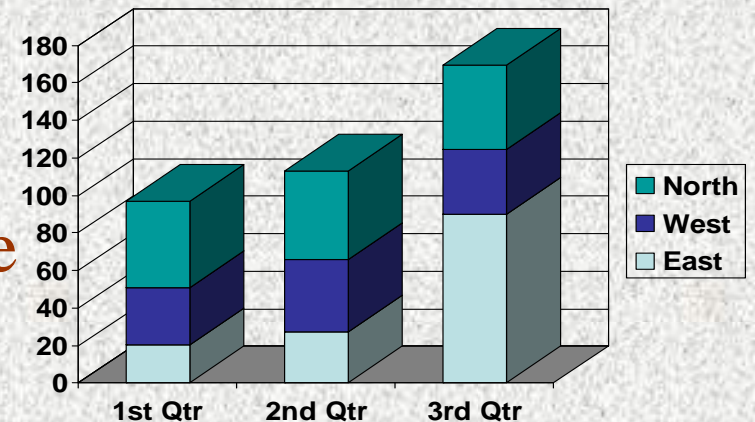
# The Spreadsheet: Charts

- Pie charts (show relative proportions to the whole)



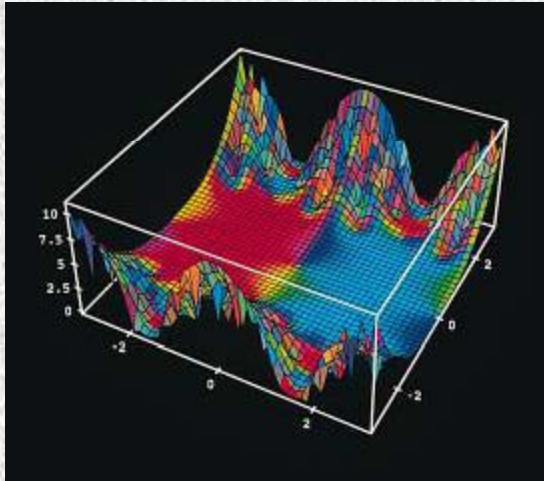
- Line charts (show trends or relationships over time)

- Bar charts (show side-by-side comparisons)

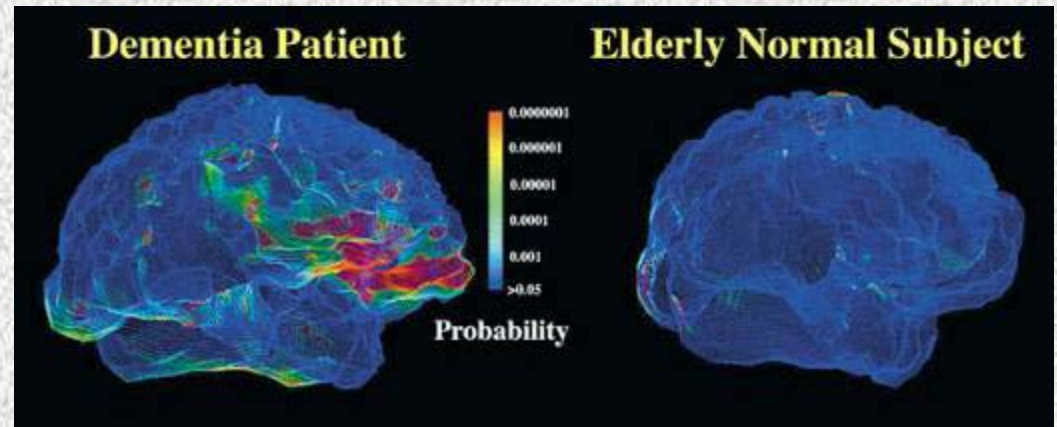


# Computer Modeling

Computers can be used to create models of objects, processes, organisms, and organizations.



**Statistical and Data Analysis**



**Scientific and Medical Visualization**



**Computer Based Training**



**Planning and Forecasting**