

# Igor Intro

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# Igor is...

Made by:

Wavemetrics ([www.wavemetrics.com](http://www.wavemetrics.com))

Used for:

data analysis

generating publication-quality graphs

data acquisition (less common)

Much like:

Mathematica, Origin, Sigma Plot

C programming language

# Key Igor Concepts

## **Wave**

1, 2, 3, or 4 dimension ordered set of values

text or numeric

individual values within a wave are referred to as points

naming – best to use only the characters a-Z, “\_”, and “0-9”

## **Command window**

place to enter commands for execution

also serves as a history of previously executed commands

## **Experiment**

contains all parts in one file (data, code, graphs, tables, etc)

.pxp extension

## **Procedure file/window**

place where user created code lives

## **XOP (external operation file)**

code modules that adds functionality

## **Not case sensitive**

**Starts counting from 0**

# Igor Tasks for Today

## (A) Demonstrate basic tasks

Create, modify simple data

Create, modify simple graphs

## (B) Begin to step through a Wavemetrics tutorial

Open up a demo experiment to view/manipulate  
Gauss, Lorentzian and Voigt lineshapes

# Task (A) Demonstrate Basic Tasks

1. Make a wave called `xwave` of 101 points
2. Make a table of this wave
3. Change the values in `xwave` to be -50, -49... 49, 50  
**`xwave = -50 + p`**
4. Duplicate this wave, name it `ywave`
5. Change the values in `ywave` to be  
**`ywave = 1 + 3*exp( - (xwave/20)^2 )`**
6. Plot `ywave` vs `xwave`
7. Create another wave named `ywave2` and add to plot  
**`ywave2 = 1 + 3*exp( - (xwave/30)^2 )`**
8. Modify the graph by adding legends, axis labels, and displaying points and markers
9. Add cursors to graph to view individual values
10. Save graph macro
11. Recreate graph via graph macro
12. Save the experiment

# Task (B)

## Step Through a Wavemetrics Tutorial

1. Open up file

Programs: Wavemetrics:Igor Pro Folder:Examples:  
Curve Fitting:Multi-peak fit.pxp

2. Follow Tutorial

3. Play

# For More Igor Help

Go through the Help/Getting Started tutorial!

Don't be afraid to explore!

Contact me!

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