

Pensieve header: Sep 15: Textbook (EIWL) chapters 1-4.

## I. Starting Out: Elementary Arithmetic

$2 + 2$

$1234 + 5678$

$1234 * 5678$

$2/3 + 1/4$

## 2. Introducing Functions

`Plus[3, 4]`

`Plus[1, 2, 3]`

`Times[2, 3]`

`Times[2, Plus[2, 3]]`

`Max[2, 7, 3]`

`RandomInteger[100]`

## 3. First Look at Lists

`{1, 2, 3, 4, a, b, c}`

`ListPlot[{1, 1, 2, 2, 3, 4, 4}]`

`Range[10]`

`ListPlot[Range[20]]`

`Reverse[{1, 2, 3, 4}]`

`Reverse[Range[10]]`

`ListPlot[Reverse[Range[10]]]`

`Join[{1, 2, 3}, {4, 5}, {6, 7}]`

`ListPlot[Join[Range[20], Range[20], Range[30]]]`

`ListPlot[Join[Range[20], Reverse[Range[20]], Range[30]]]`

## 4. Displaying Lists

`ListLinePlot[{1, 3, 5, 4, 1, 2, 1, 4}]`

`ListPlot[{1, 3, 5, 4, 1, 2, 1, 4}]`

`BarChart[{1, 3, 5, 4, 1, 2, 1, 4}]`

```
PieChart[{1, 3, 5, 4}]
```

```
NumberLinePlot[{1, 7, 11, 25}]
```

```
Column[{100, 350, 502, 400}]
```

```
{PieChart[Range[3]], PieChart[Range[5]]}
```

```
{BarChart[{1, 1, 4, 2}], BarChart[{5, 1, 1, 0}], BarChart[{1, 3, 2, 4}]}
```