

Nice. On the very first one, he wanted something else. 8 / 8.

Tahm — PS 13 — 2025-03-25

EIWL3 Sections 33 and 34

In[16]:= **Head[ListPlot]**

Out[16]=

Symbol

Oops. He wanted **Head[ListPlot[{1,2,3}]]** which is more instructive.

In[17]:= **Times@@Range[100]**

Out[17]=

93 326 215 443 944 152 681 699 238 856 266 700 490 715 968 264 381 621 468 592 963 895 217 599 993
229 915 608 941 463 976 156 518 286 253 697 920 827 223 758 251 185 210 916 864 000 000 000 000
000 000 000 000

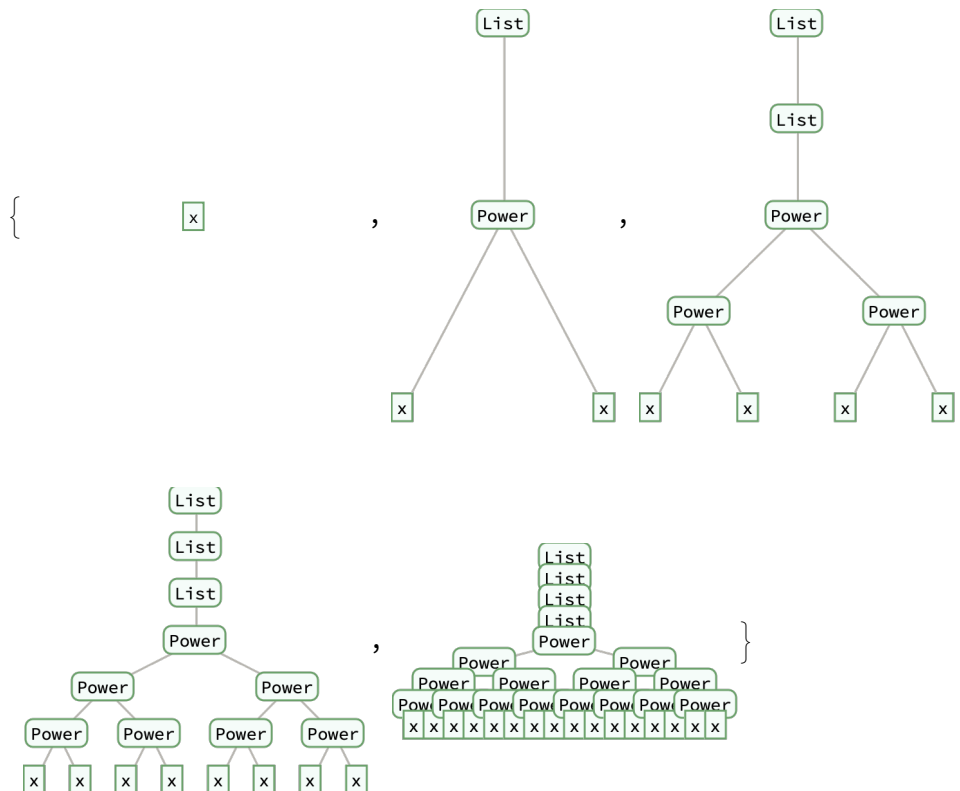
In[18]:= **f@@@Tuples[{a, b}, 2]**

Out[18]=

{f[a, a], f[a, b], f[b, a], f[b, b]}

In[19]:= **ExpressionTree /@ NestList[{#^#} &, x, 4]**

Out[19]=



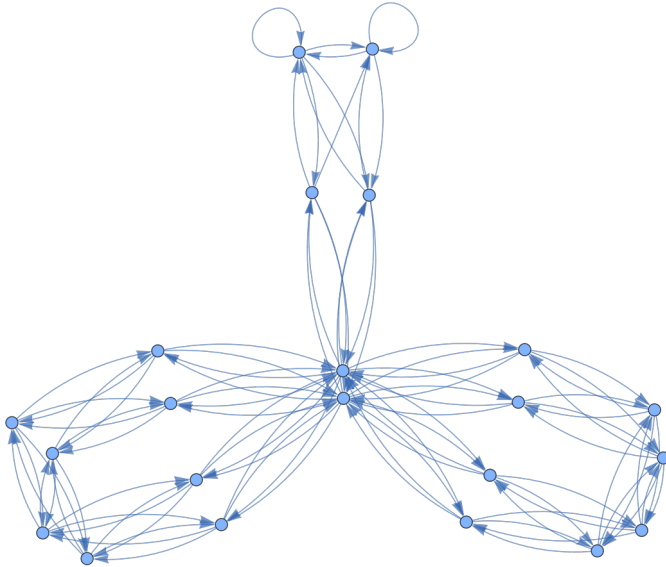
Nice. Hardly anybody realized they should add Union.

```
In[20]:= Union[Cases[
  Flatten[Table[{i^2 / (j^2 + 1)}, {i, 20}, {j, 20}]], _Integer]]
```

```
Out[20]:=
{2, 5, 8, 10, 17, 18, 20, 32, 40, 45, 50, 72, 80, 98, 128, 162, 200}
```

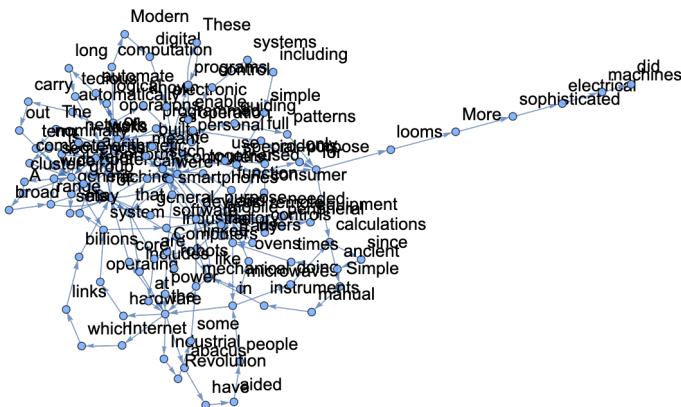
```
In[21]:= Graph[Rule @@@ Partition[Table[Mod[n^2 + n, 100], {n, 100}], 2, 1]]
```

```
Out[21]=
```



```
In[22]:= Graph[Rule @@@ Partition[TextWords[WikipediaData["Computers"], 200], 2, 1],
  VertexLabels -> All]
```

```
Out[22]=
```



```
In[23]:= FullForm[f @ # & /@ {{1, 2}, {7, 2}, {5, 4}}]
```

```
Out[23]//FullForm=
```

```
List[f[1, 2], f[7, 2], f[5, 4]]
```

```
In[24]:= f @@@ {{1, 2}, {7, 2}, {5, 4}}
```

```
Out[24]=
```

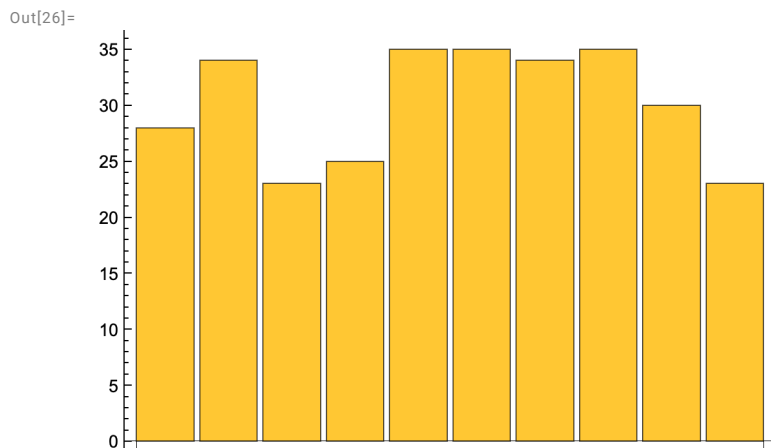
```
{f[1, 2], f[7, 2], f[5, 4]}
```

Chapter 34

```
In[25]:= Values[KeySort[Counts[IntegerDigits[3^100]]]]
```

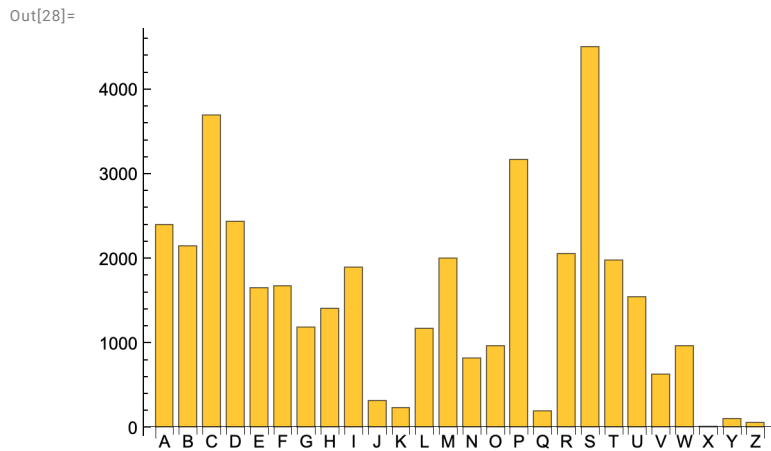
```
Out[25]:= {7, 9, 9, 5, 1, 5, 4, 7, 1}
```

```
In[26]:= BarChart[Values[KeySort[Counts[IntegerDigits[2^1000]]]]]
```



```
In[27]:=
```

```
In[28]:= BarChart[KeySort[Counts[ToUpperCase[StringTake[WordList[], 1]]]],  
ChartLabels → Automatic]
```



```
In[29]:= TakeLargest[KeySort[Counts[ToUpperCase[StringTake[WordList[], 1]]]],  
5]
```

```
Out[29]= <| S → 4502, C → 3694, P → 3168, D → 2436, A → 2397 |>
```

```
In[30]:= #q / #u &@LetterCounts[WikipediaData["Computers"]]
```

```
Out[30]=
```

$$\frac{63}{1570}$$

```
In[31]:= Keys[TakeLargest[Counts[TextWords[ExampleData[{"Text", "AliceInWonderland"}]]], 10]]
```

```
Out[31]=
```

```
{the, and, a, to, she, of, was, Alice, in, it}
```

```
In[32]:=
```

```
In[33]:=
```

```
In[34]:=
```

```
In[35]:=
```

```
In[36]:=
```