

```
In[1]:= Plus[3, 4]
```

```
Out[1]=
```

```
7
```

```
In[2]:= Times[2, 3]
```

```
Out[2]=
```

```
6
```

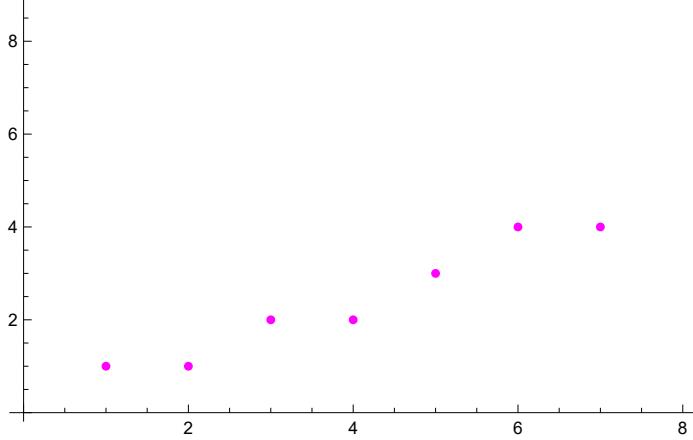
```
In[3]:= Times[2, Plus[2, 3]]
```

```
Out[3]=
```

```
10
```

```
In[4]:= ListPlot[{1, 1, 2, 2, 3, 4, 4, 88}, PlotStyle -> Magenta]
```

```
Out[4]=
```



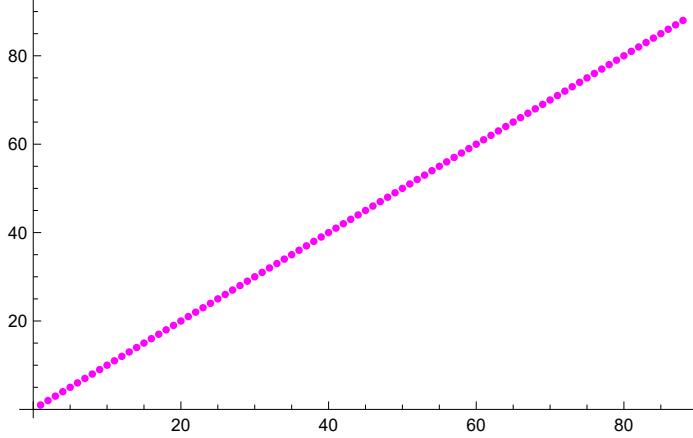
```
In[5]:= x = Range[88]
```

```
Out[5]=
```

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,
26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46,
47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67,
68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88}
```

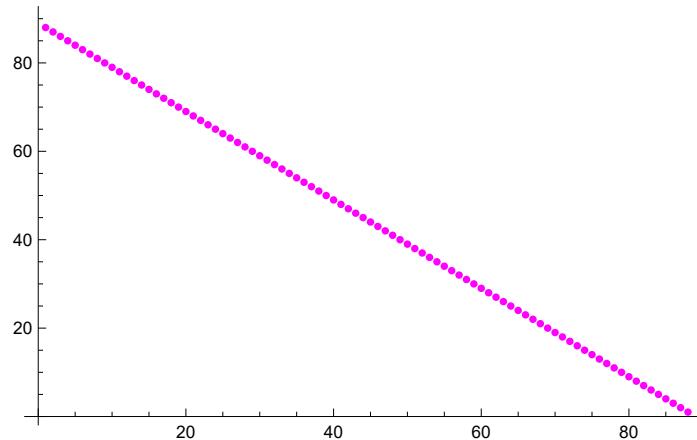
```
In[6]:= ListPlot[x, PlotStyle -> Magenta]
```

```
Out[6]=
```



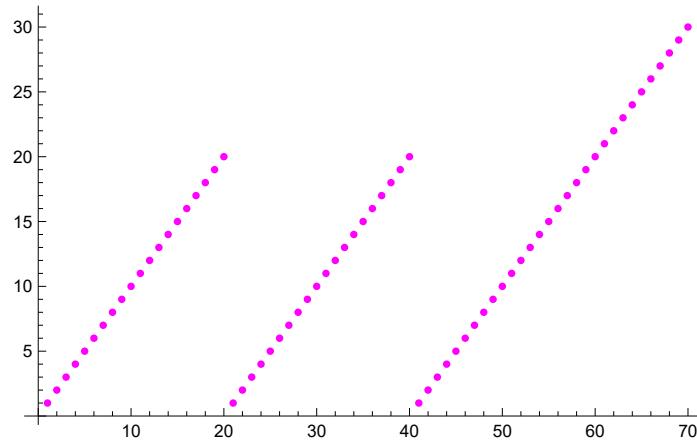
```
In[6]:= ListPlot[Reverse[x], PlotStyle -> Magenta]
```

```
Out[6]=
```



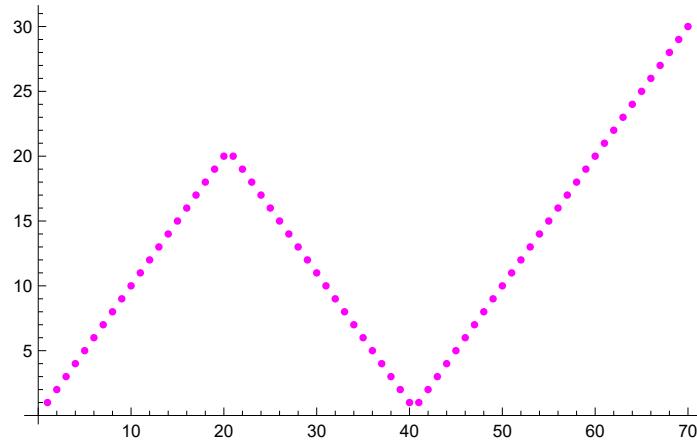
```
In[7]:= ListPlot[Join[Range[20], Range[20], Range[30]], PlotStyle -> Magenta]
```

```
Out[7]=
```



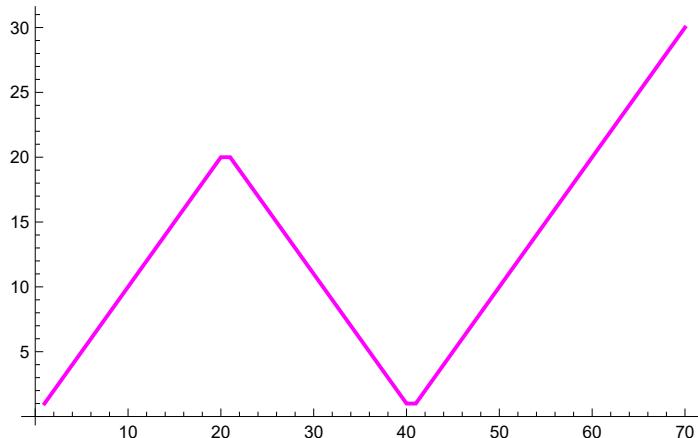
```
In[8]:= ListPlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

```
Out[8]=
```



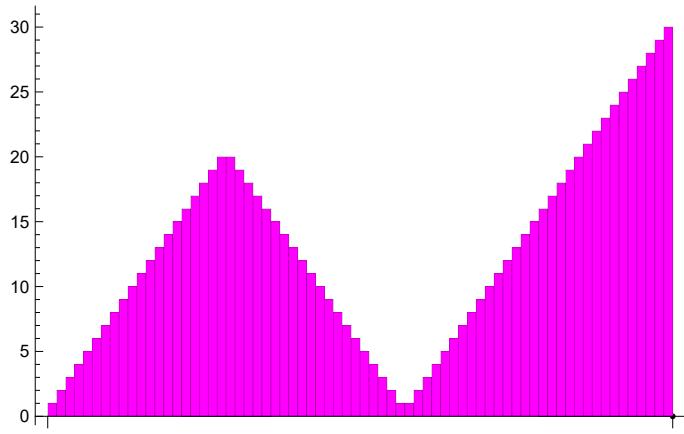
```
In[]:= ListLinePlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

```
Out[]=
```



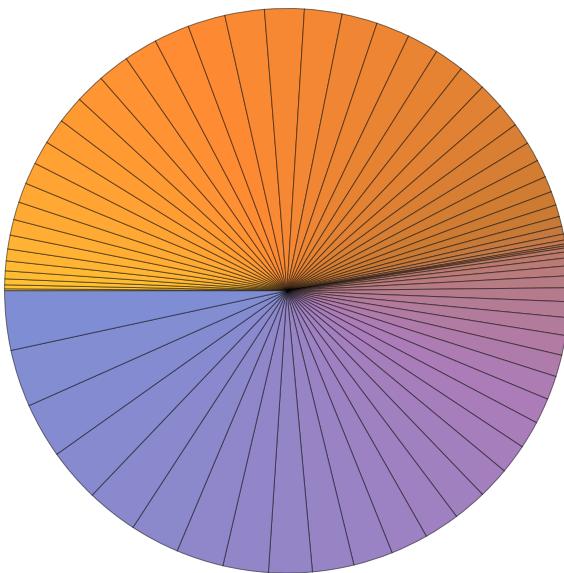
```
In[]:= BarChart[Join[Range[20], Reverse[Range[20]], Range[30]], ChartStyle -> Magenta]
```

```
Out[]=
```



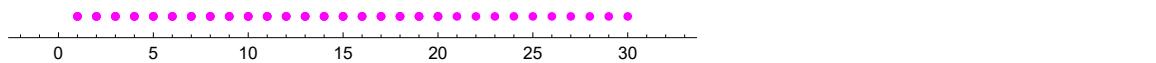
```
In[]:= PieChart[Join[Range[20], Reverse[Range[20]], Range[30]], ChartStyle -> "Hue[.5]"]
```

```
Out[]=
```



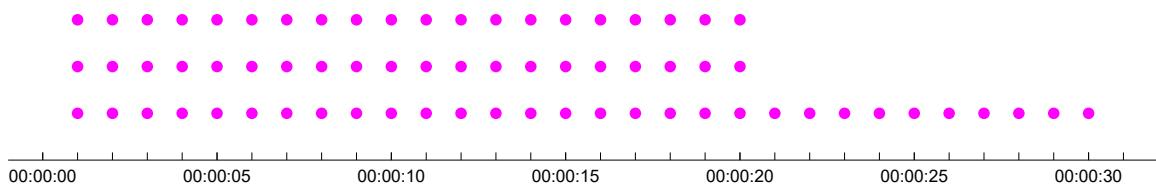
```
In[1]:= NumberLinePlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

```
Out[1]=
```



```
In[2]:= TimelinePlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

```
Out[2]=
```



```
In[3]:= data = Table[{3 + i + RandomReal[{-3, 7}], i + RandomReal[{-2, 5}]}, {i, 1, 20}];
```

```
In[4]:= model = LinearModelFit[data, x, x]
```

```
Out[4]=
```

$$\text{FittedModel} \left[ -0.81 + 0.874 x \right]$$

```
In[5]:= model["BestFit"]
```

```
Out[5]=
```

$$-0.810145 + 0.874127 x$$

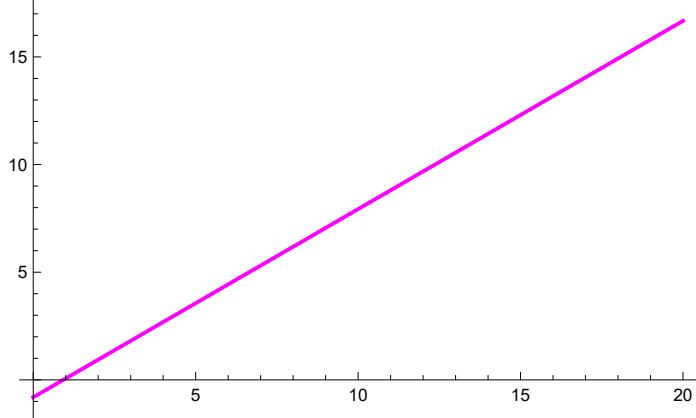
```
In[6]:= model["BestFit"]
```

```
Out[6]=
```

$$-0.810145 + 0.874127 x$$

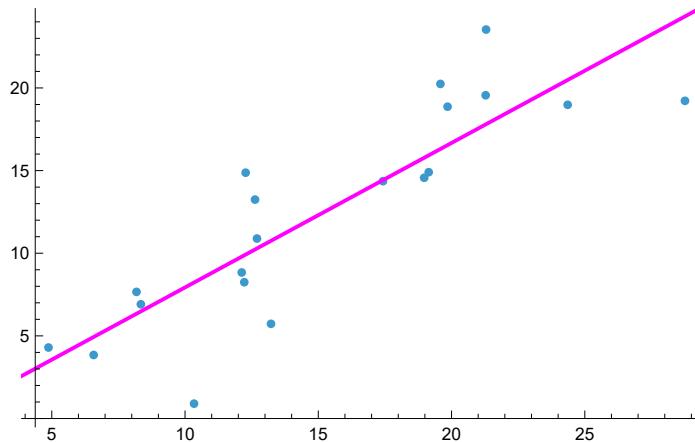
```
In[7]:= Plot[model["BestFit"], {x, 0, 20}, PlotStyle -> Magenta]
```

```
Out[7]=
```



```
In[6]:= Show[ListPlot[data], Plot[model["BestFit"], {x, 0, 30}, PlotStyle -> Magenta]]
```

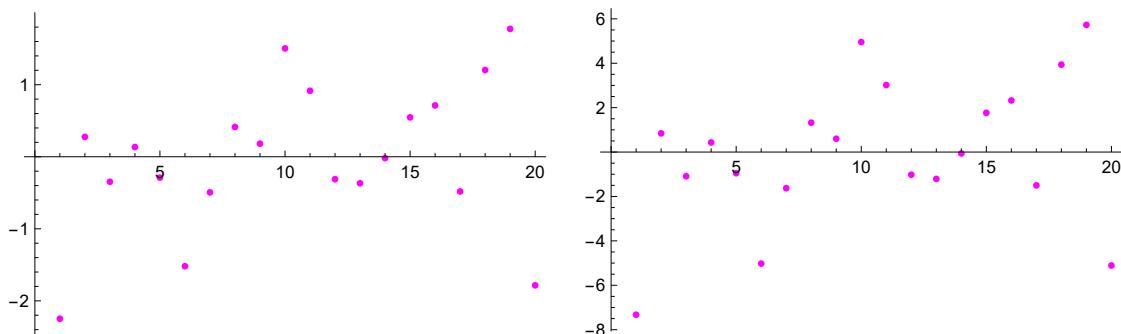
```
Out[6]=
```



```
In[7]:= {sr, fr} = model[{"StandardizedResiduals", "FitResiduals"}];
```

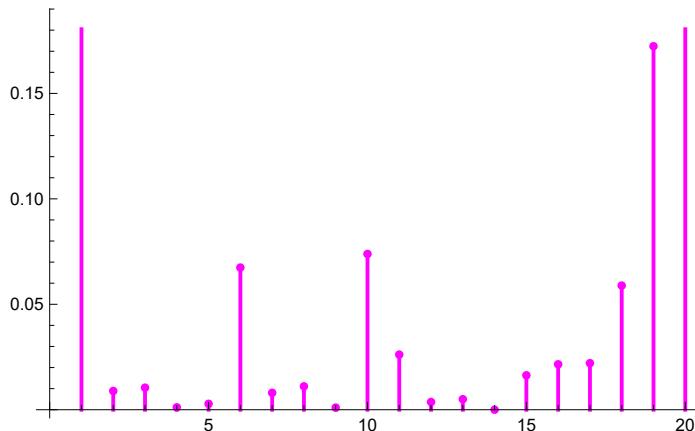
```
{ListPlot[sr, PlotStyle -> Magenta], ListPlot[fr, PlotStyle -> Magenta]} // GraphicsGrid
```

```
Out[7]=
```



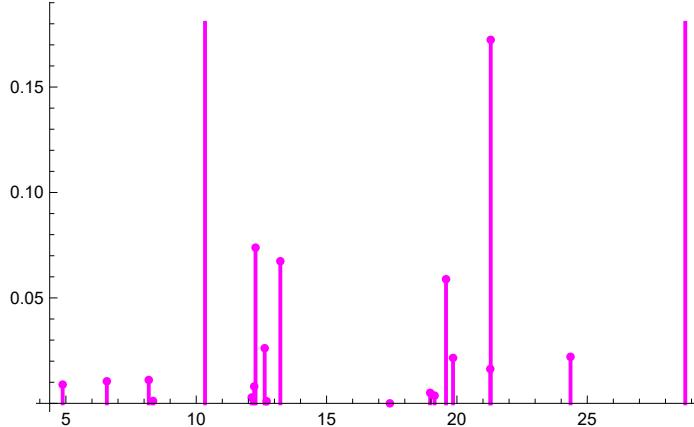
```
In[8]:= ListPlot[model["CookDistances"],
 Filling -> Axis, FillingStyle -> Thick, PlotStyle -> Magenta]
```

```
Out[8]=
```



```
In[6]:= ListPlot[Transpose[{data[[All, 1]], model["CookDistances"]}],  
  Filling -> Axis, FillingStyle -> Thick, PlotStyle -> Magenta]
```

Out[6]=



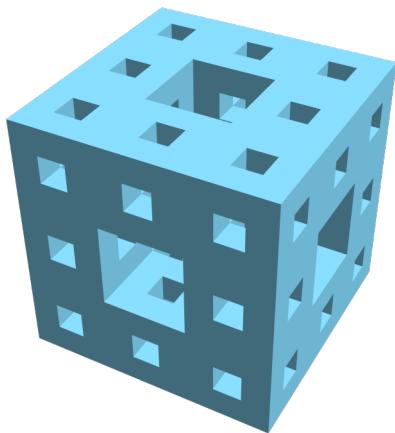
```
In[7]:= model["Properties"]
```

Out[7]=

```
{AdjustedRSquared, AIC, AICc, ANOVA, BestFitAround, BestFitDataAround, BasisFunctions,  
BetaDifferences, BestFit, BestFitParameters, BIC, CatcherMatrix, CoefficientOfVariation,  
CookDistances, CorrelationMatrix, CovarianceMatrix, CovarianceRatios, Data, Weights,  
DesignMatrix, DurbinWatsonD, Eigenstructure, EstimatedVariance, FitDifferences,  
FitResiduals, Function, TabularFunction, FVarianceRatios, HatDiagonal,  
MeanPredictions, MeanPredictionBands, ParameterEstimates, PartialSumOfSquares,  
PredictedResponse, Properties, Response, RSquared, SequentialSumOfSquares,  
SingleDeletionVariances, SinglePredictions, SinglePredictionBands,  
StandardizedResiduals, StudentizedResiduals, VarianceInflationFactors}
```

```
In[8]:= mesh = MengerMesh[2, 3]
```

Out[8]=



```
In[9]:= SurfaceArea[mesh]
```

Out[9]=

13.037

```
In[10]:= Integrate[y z, {x, y, z} ∈ mesh]
```

Out[10]=

0.137174

```
In[6]:= RegionPlot3D[mesh, ColorFunction→Function[{x, y, z}, Hue[Norm[{x, y, z}]]]]  
Out[6]=
```

