

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

```
Out[ ]:=
```

7

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

```
Out[ ]:=
```

6

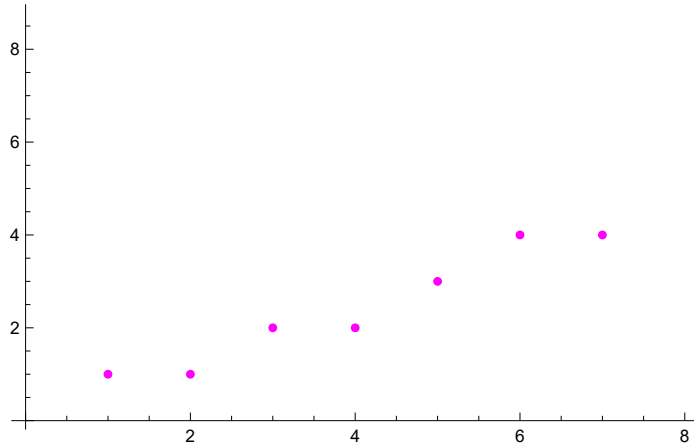
```
In[ ]:= Times[2, Plus[2, 3]]
```

```
Out[ ]:=
```

10

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

```
Out[ ]:=
```



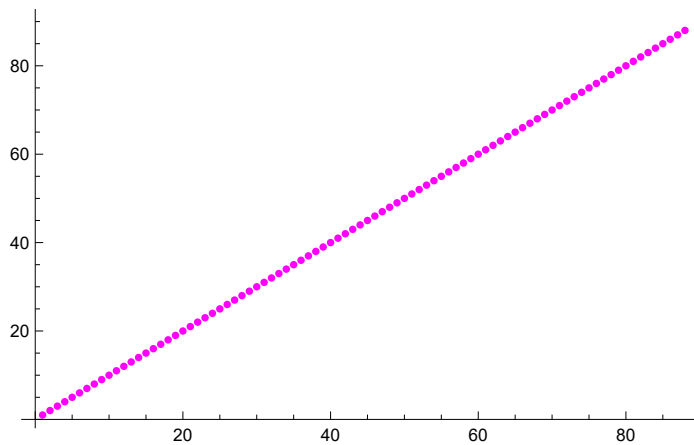
```
In[ ]:= x = Range[88]
```

```
Out[ ]:=
```

{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}

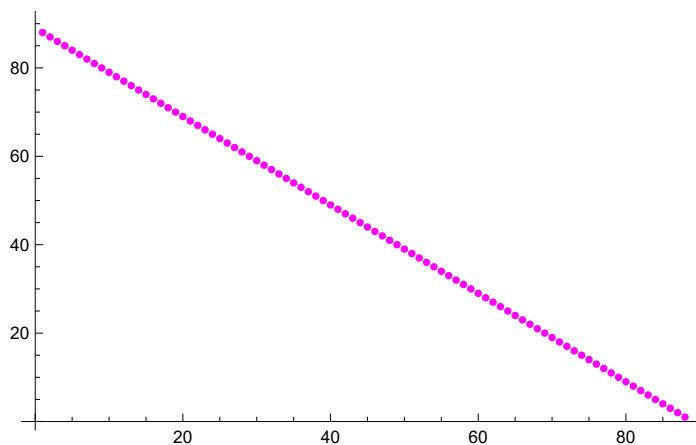
```
In[ ]:= ListPlot[x, PlotStyle → Magenta]
```

```
Out[ ]:=
```



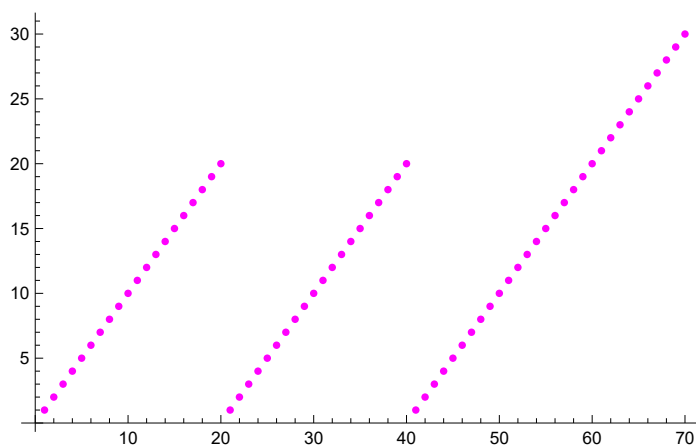
```
In[ ]:= ListPlot[Reverse[x], PlotStyle -> Magenta]
```

```
Out[ ]:=
```



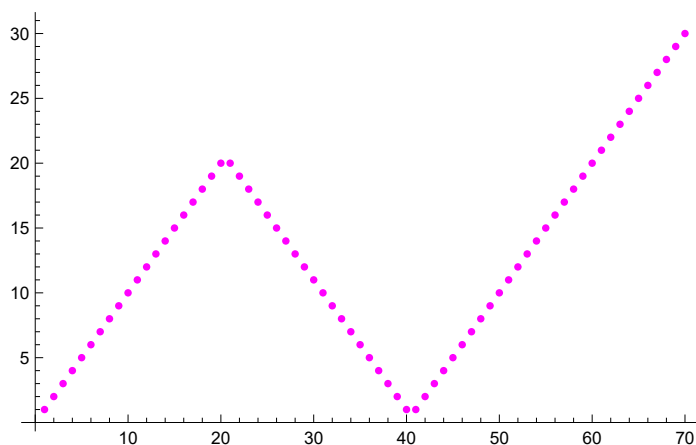
```
In[ ]:= ListPlot[Join[Range[20], Range[20], Range[30]], PlotStyle -> Magenta]
```

```
Out[ ]:=
```



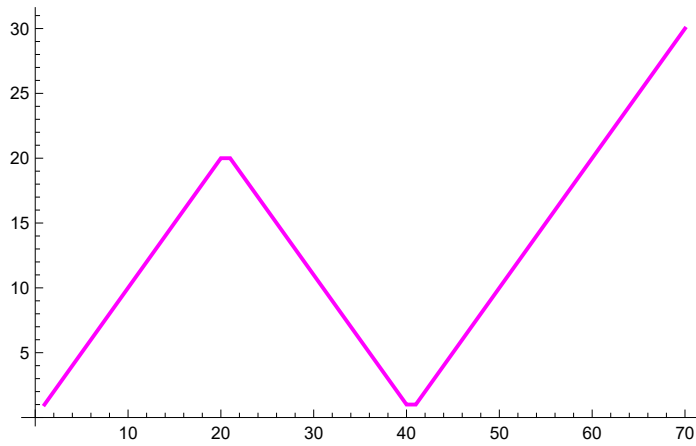
```
In[ ]:= ListPlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

```
Out[ ]:=
```



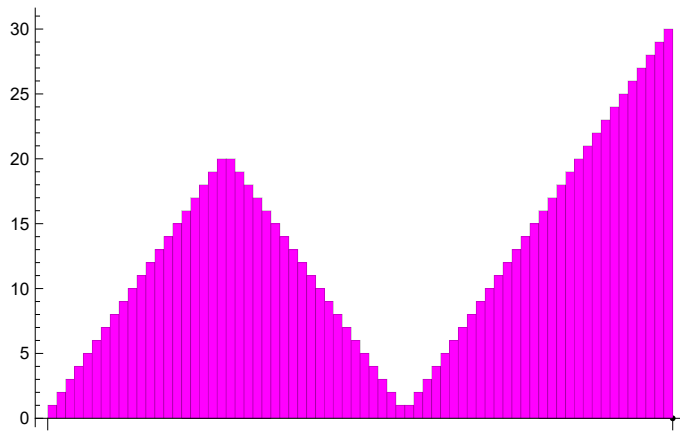
```
In[ ]:= ListLinePlot[Join[Range[20], Reverse[Range[20]], Range[30]], PlotStyle -> Magenta]
```

Out[ ]:=



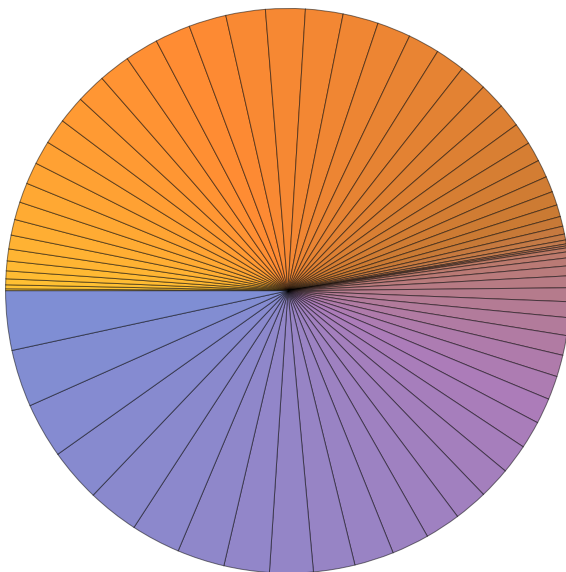
```
In[ ]:= BarChart[Join[Range[20], Reverse[Range[20]], Range[30]], ChartStyle -> Magenta]
```

Out[ ]:=



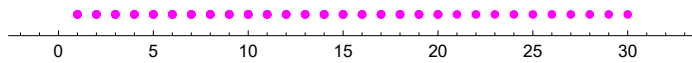
```
In[ ]:= PieChart[Join[Range[20], Reverse[Range[20]], Range[30]], ChartStyle -> "Hue[.5]"]
```

Out[ ]:=



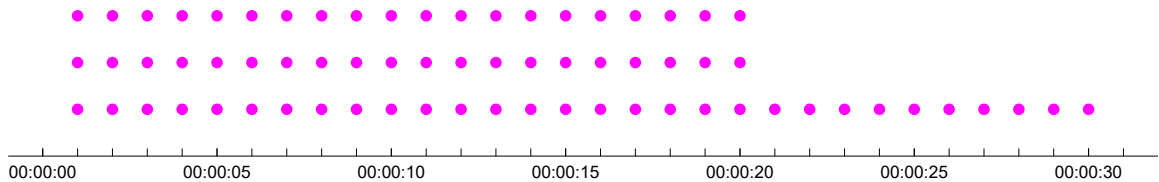
```
In[ ]:= NumberLinePlot[Join[Range[20], Reverse[Range[20]]], Range[30]], PlotStyle -> Magenta]
```

```
Out[ ]:=
```



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

```
Out[ ]:=
```



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

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

```
Out[ ]:=
```

FittedModel[ $-0.81 + 0.874 x$ ]

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

```
Out[ ]:=
```

$-0.810145 + 0.874127 x$

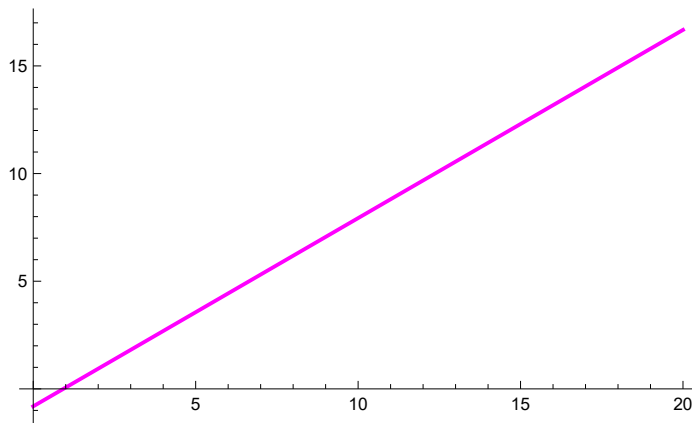
```
In[ ]:= model["BestFit"]
```

```
Out[ ]:=
```

$-0.810145 + 0.874127 x$

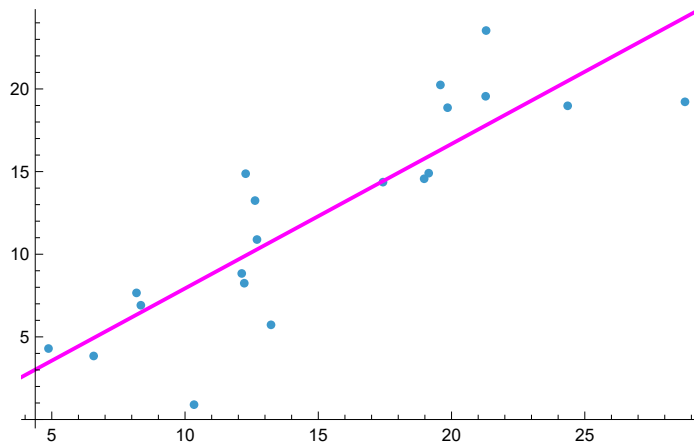
```
In[ ]:= Plot[model["BestFit"], {x, 0, 20}, PlotStyle -> Magenta]
```

```
Out[ ]:=
```



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

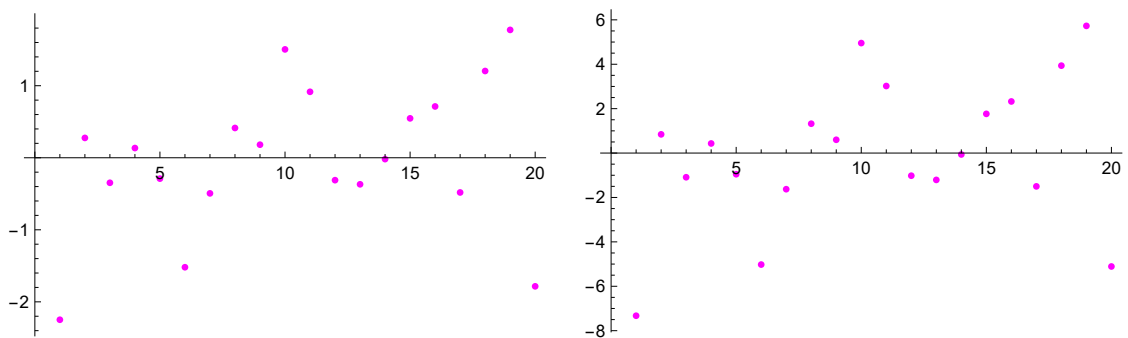
```
Out[ ]:=
```



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

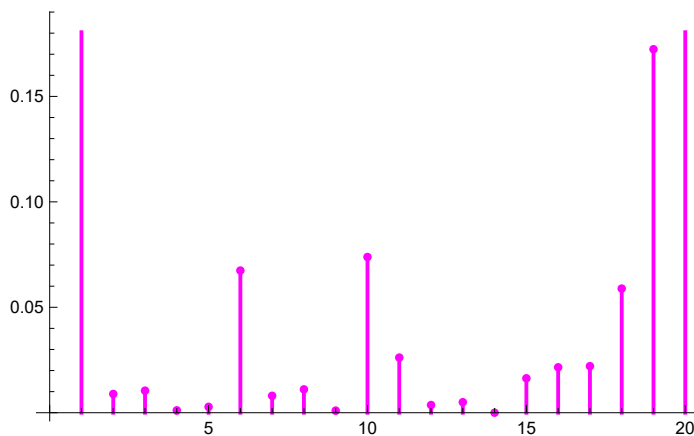
```
{{ListPlot[sr, PlotStyle → Magenta], ListPlot[fr, PlotStyle → Magenta]}} // GraphicsGrid
```

```
Out[ ]:=
```



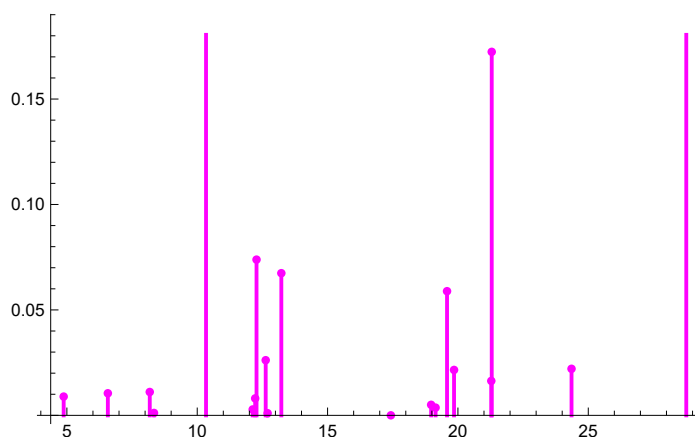
```
In[ ]:= ListPlot[model["CookDistances"],  
Filling → Axis, FillingStyle → Thick, PlotStyle → Magenta]
```

```
Out[ ]:=
```



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

Out[ ]=



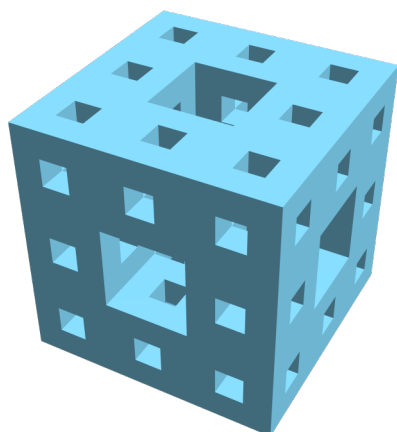
```
In[ ]:= model["Properties"]
```

Out[ ]=

```
{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[ ]:= mesh = MengerMesh[2, 3]
```

Out[ ]=



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

Out[ ]=

13.037

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

Out[ ]=

0.137174

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

