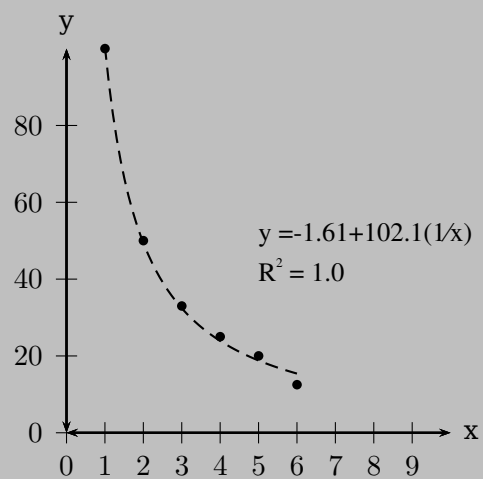


PSTricks

pst-fit

Curve fitting; v.0.02

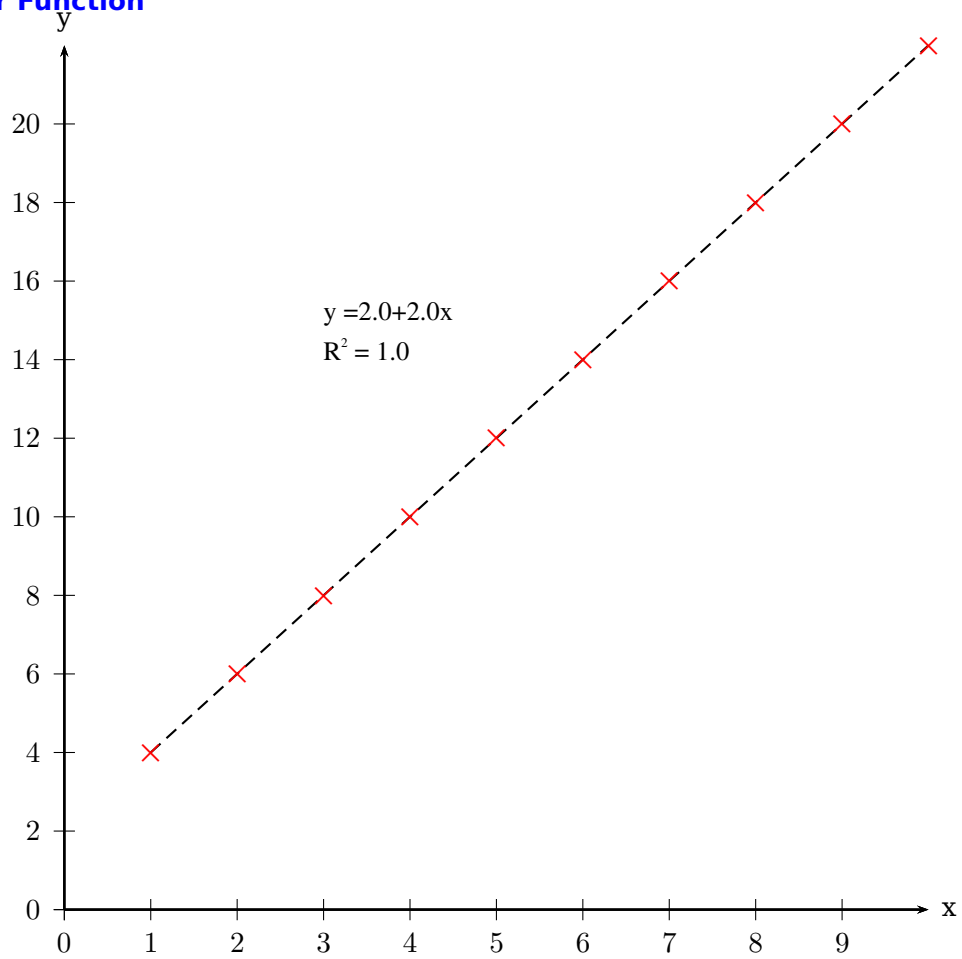
August 24, 2017



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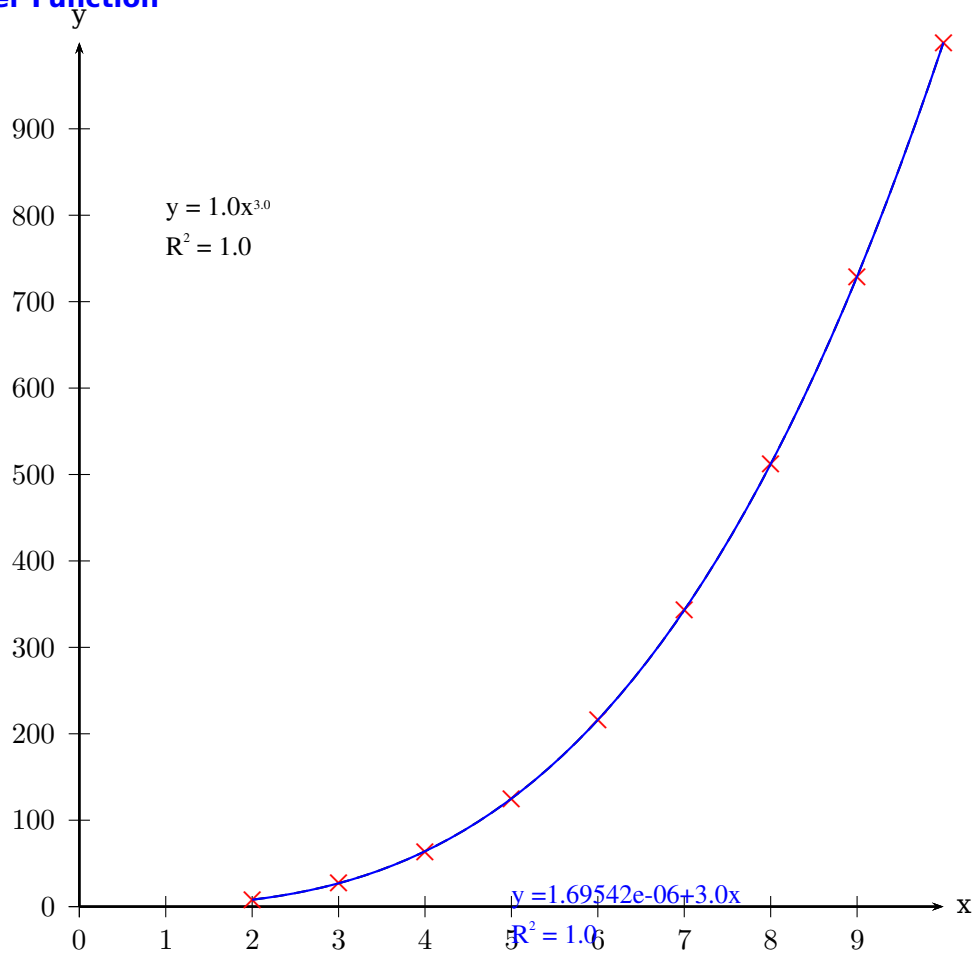
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1 Fit of Linear Function

```
\begin{psgraph}[arrows=->,Dy=2](0,0)(0,0)(10,22){4.5in}{4.5in}
\listplot[decimals=2,EqPos=3 15,plotstyle=GLLSR,linestyle=dashed]{\Linear}
\listplot[plotstyle=dots,linecolor=red,dotstyle=x]{\Linear}
\end{psgraph}
```

2 Fit of Power Function

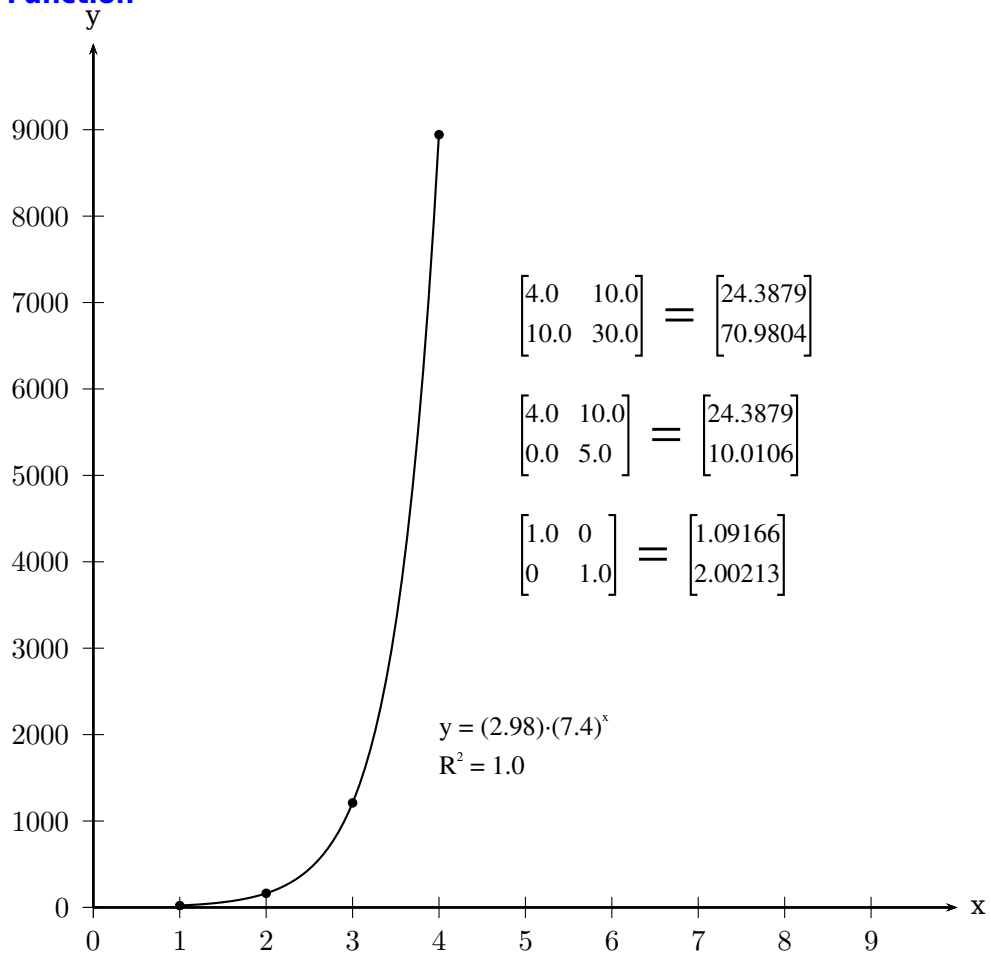


```

\begin{psgraph}[arrows=->,Dy=100](0,0)(0,0)(10,1000){4.5in}{4.5in}
\listplot[decimals=2,EqPos=1 800,linestyle=dashed,plotstyle=GLLSR,PowerFit]{\Power}
\listplot[plotstyle=dots,linecolor=red,dotstyle=x]{\Power}
\listplot[EqPos=5 4,plotstyle=GLLSR,linecolor=blue,CustomFit,CheckZeroX,CheckZeroY,FYtrans=log,RYtrans=10 exch exp,FXtrans=log]{\Power}
\end{psgraph}

```

3 Fit of exp Function

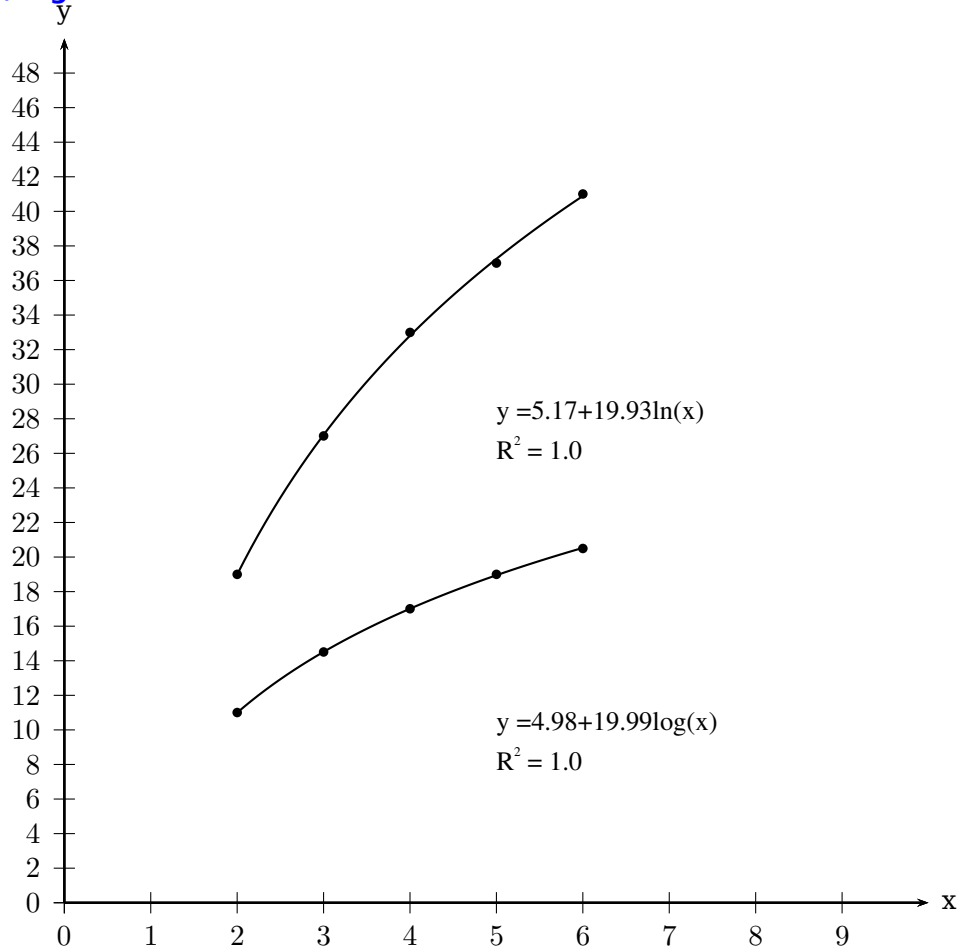


```

\begin{psgraph}[arrows=->,Dx=1,Dy=1000,xsubticks=1,ysubticks=1](0,0)(0,0)(10,10000){4.5in}
  {4.5in}
\listplot[PstDebug=1,decimals=2,EqPos=4 2000,MaPos=5 7000,plotstyle=GLLSR,ExpFit]{\Exp}
\listplot[plotstyle=dots]{\Exp}
\end{psgraph}

```

4 Fit of Log10/Loge Functions

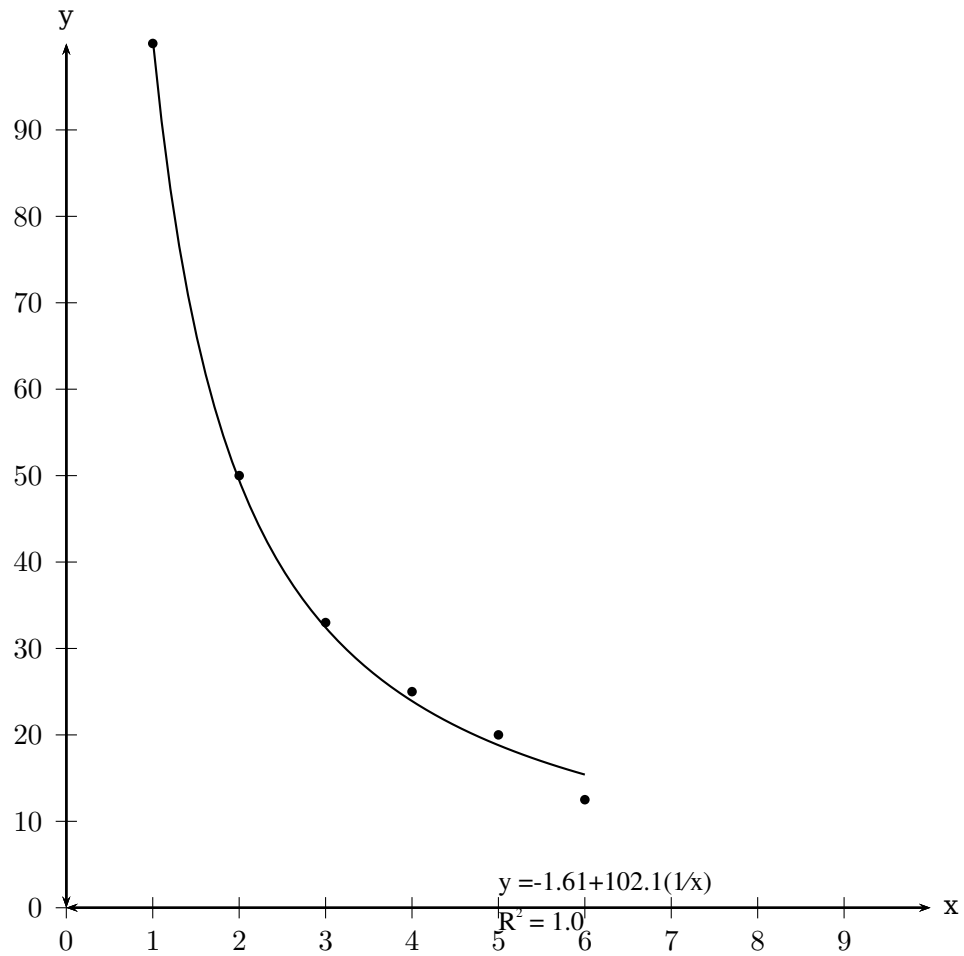


```

\begin{psgraph}[arrows=->,Dx=1,Dy=2,xsubticks=1,ysubticks=1](0,0)(0,0)(10,50){4.5in}{4.5in}
\listplot[decimals=2,EqPos=5 10,plotstyle=GLLSR,LogTFit]{\Logt}
\listplot[decimals=2,plotstyle=dots]{\Logt}
\listplot[decimals=2,EqPos=5 28,plotstyle=GLLSR,LogEFit]{\Loge}
\listplot[decimals=2,plotstyle=dots]{\Loge}
%\listplot[EqPos=5 4,plotstyle=GLLSR,CustomFit,CheckZeroX=true,CheckZeroY=true,FYtrans=Yint
dup mul sub %log,RYtrans=10 exch exp Yint dup mul add,FXtrans=log]{\Linear}
\end{psgraph}

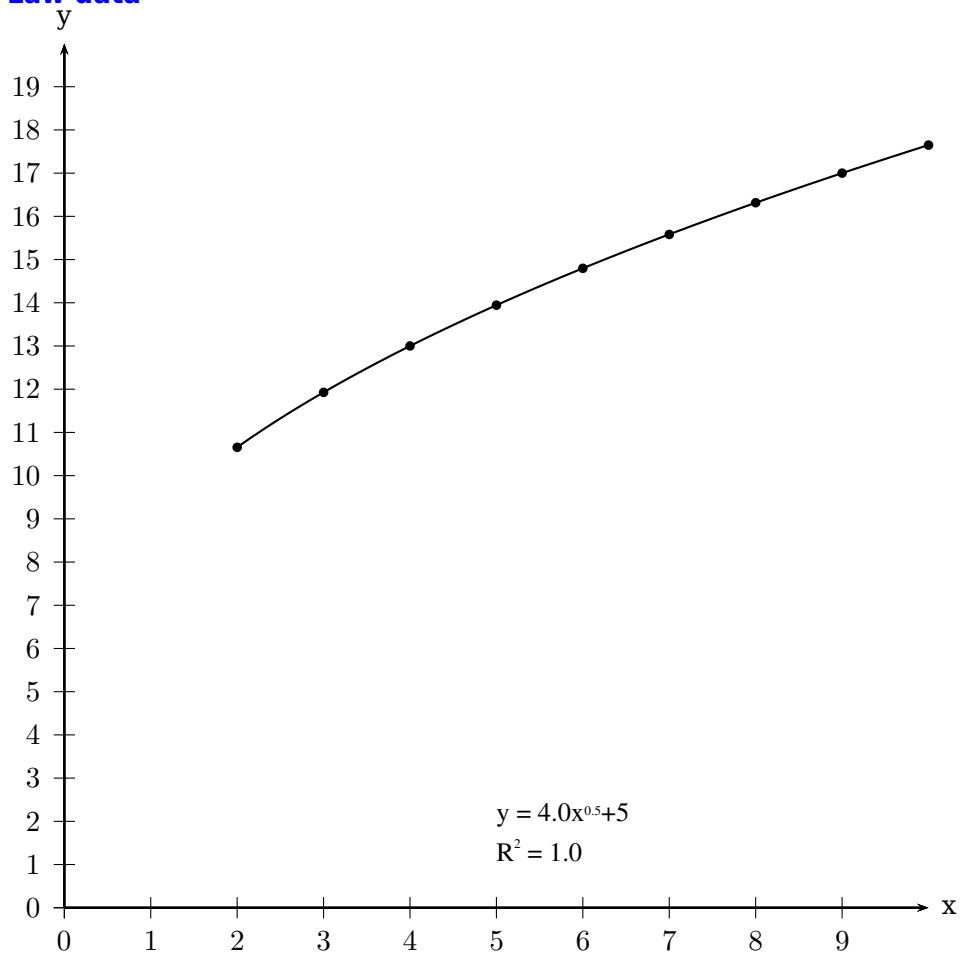
```

5 Fit of Recip



```
\begin{psgraph}[arrows=<->,Dx=1,Dy=10,xsubticks=1,ysubticks=1](0,0)(10,100){4.5in}{4.5in}
\listplot[decimals=2,EqPos=5 2,plotstyle=GLLSR,RecipFit]{\Recip}
\listplot[plotstyle=dots]{\Recip}
\end{psgraph}
```

6 Fit of Kings Law data

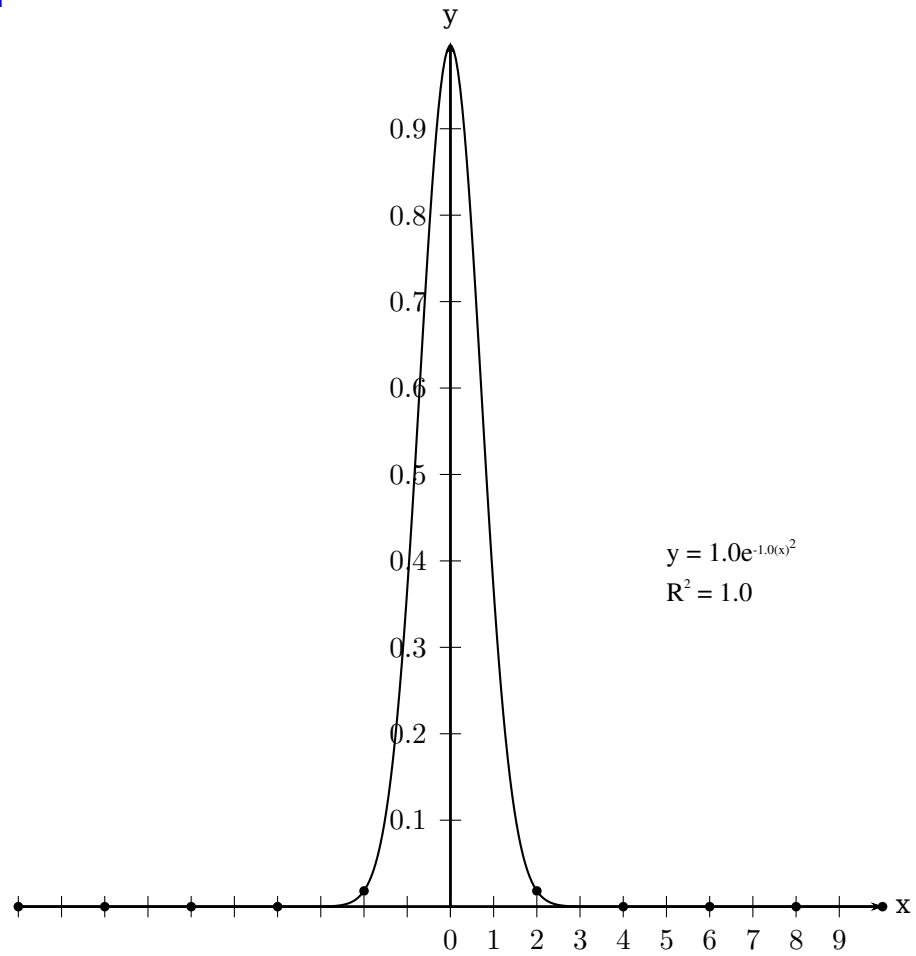


```

\begin{psgraph}[arrows=->,Dx=1,Dy=1,xsubticks=1,ysubticks=1](0,0)(10,20){4.5in}{4.5in}
\pstScalePoints(1,1){}{dup mul}
\listplot[decimals=2,EqPos=5 2,plotstyle=GLLSR,PowerFit,Yint=5]{\King}
\listplot[plotstyle=dots]{\King}
\pstScalePoints(1,1){}{}
\end{psgraph}

```


7 Fit of Guassian

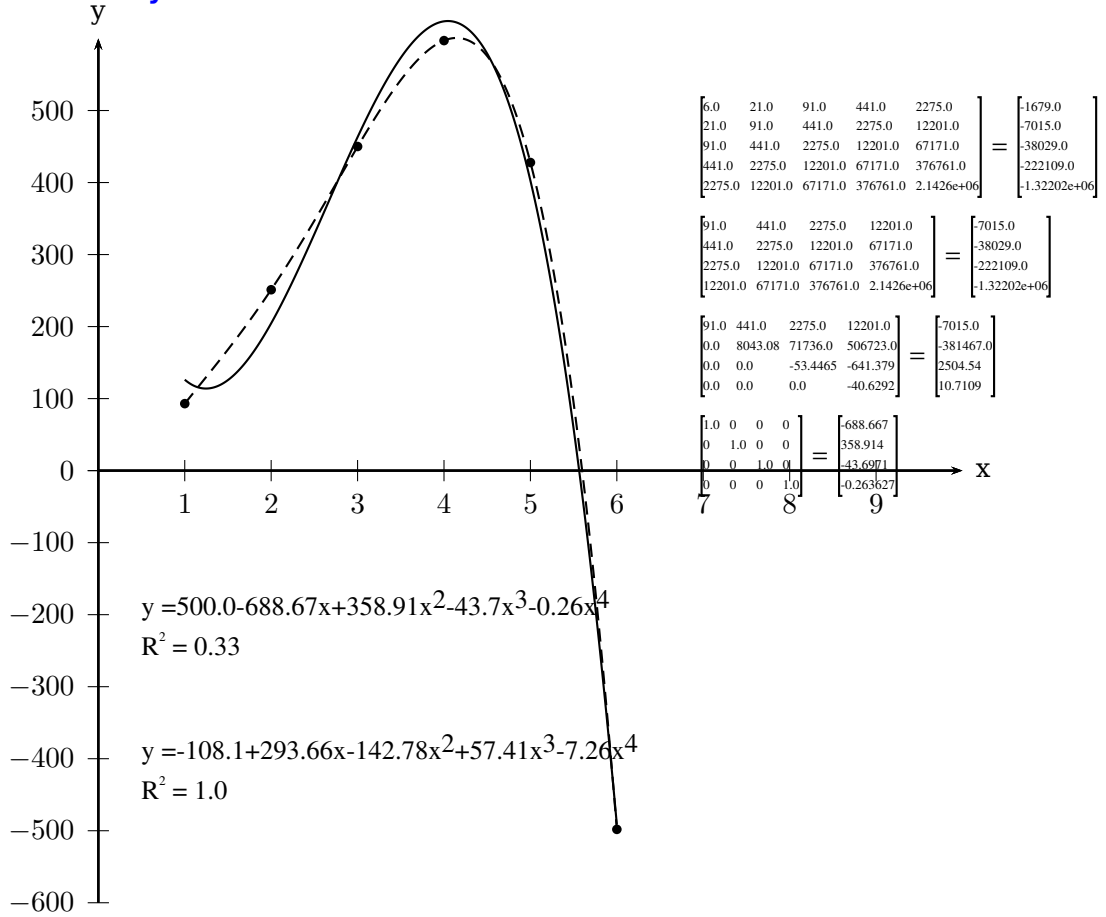


```

\begin{psgraph}[arrows=->,Dx=1,Dy=0.1,xsubticks=1,ysubticks=1](0,0)(-10,0)(10,1){4.5in}{4.5
in}
\listplot[plotstyle=dots]{\Gauss}
\listplot[decimals=2,EqPos=5 0.4,plotstyle=GLLSR,GaussFit,plotpoints=400]{\Gauss}
\end{psgraph}

```

8 Fit of 4th Order Polynomial

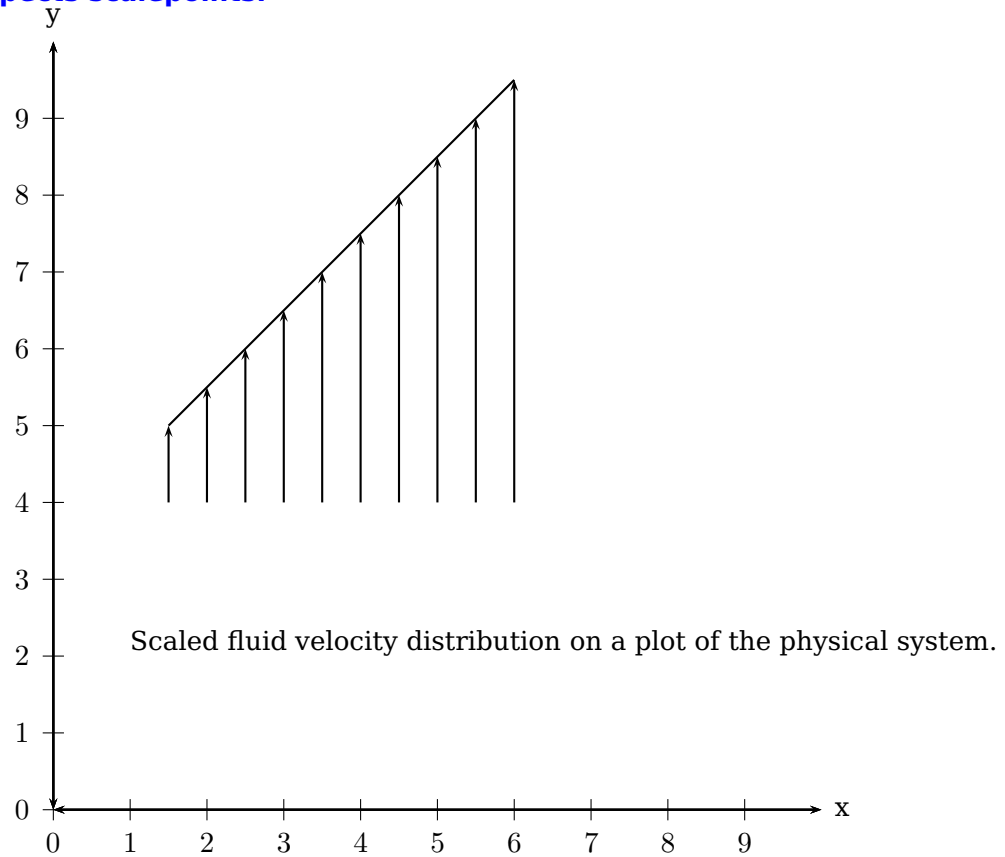


```

\begin{psgraph}[arrows=->,Dx=1,Dy=100,xsubticks=1,ysubticks=1](0,0)(0,-600)(10,600){4.5in}{4.5in}
\listplot[plotstyle=dots]{\Poly}
%note that the valuelwidth needs to be large for debugging matrices
\listplot[valuelwidth=20,PstDebug=1,decimals=2,EqPos=0.5 -200,plotstyle=GLLSR,MaPos=7 500,
MaScale=0.5,PolyOrder=4,plotpoints=400]{\Poly}
\listplot[linestyle=dashed,decimals=2,EqPos=0.5 -400,plotstyle=GLLSR,PolyOrder=4,plotpoints
=400]{\Poly}
%\listplot[decimals=2,EqPos=0.5 -200,plotstyle=GLLSR,PolyOrder=10,plotpoints=400]{\Power}
\end{psgraph}

```

9 LinetoXAxis respects scalepoints.

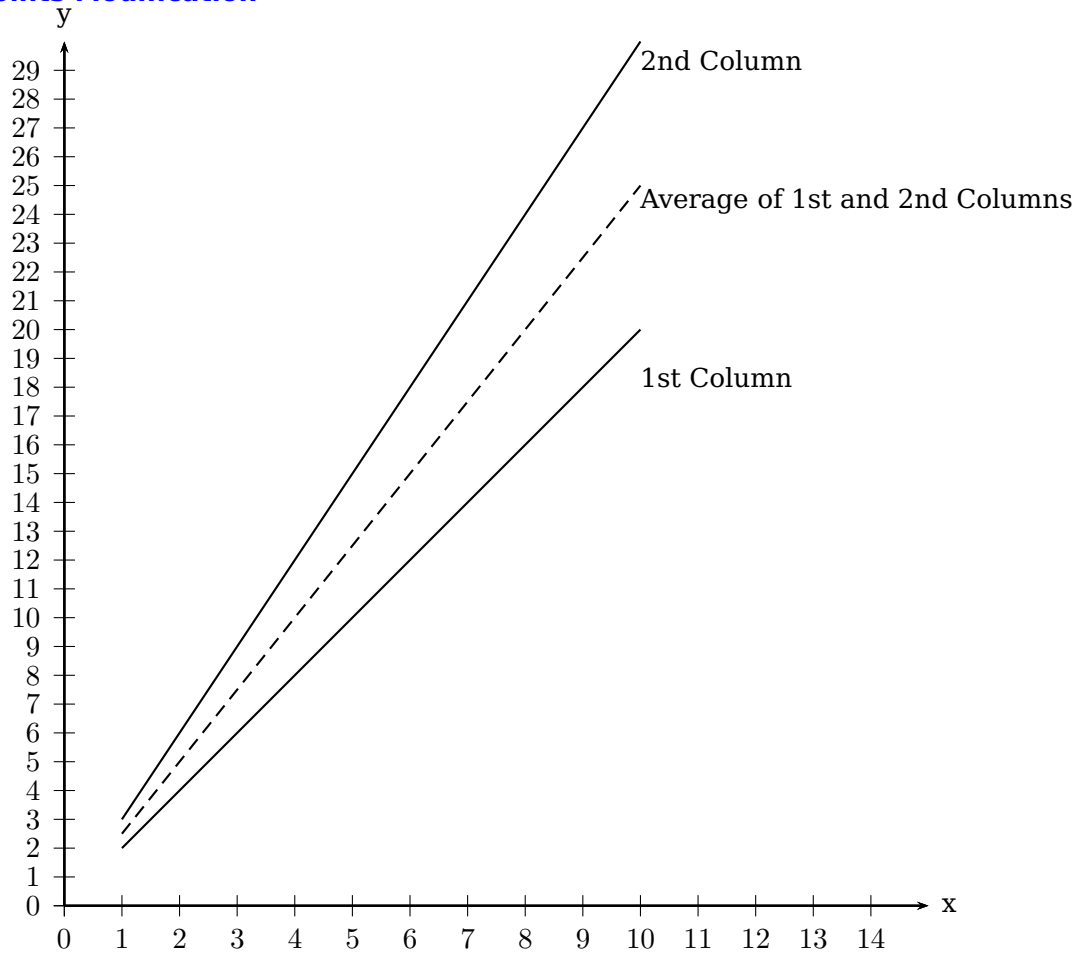


```

\begin{psgraph}[arrows=<->,Dx=1,Dy=1,xsubticks=1,ysubticks=1](0,0)(0,0)(10,10){4in}{4in}
\pstScalePoints(0.5,0.25){2 add}{16 add}
\listplot[plotstyle=line]{\Linear}
\listplot[arrows=<- ,plotstyle=LineToXAxis]{\Linear}
\pstScalePoints(1,1){}{}
\rput[lb](1,2){Scaled fluid velocity distribution on a plot of the physical system.}
\end{psgraph}

```

10 Prepare Points Modification

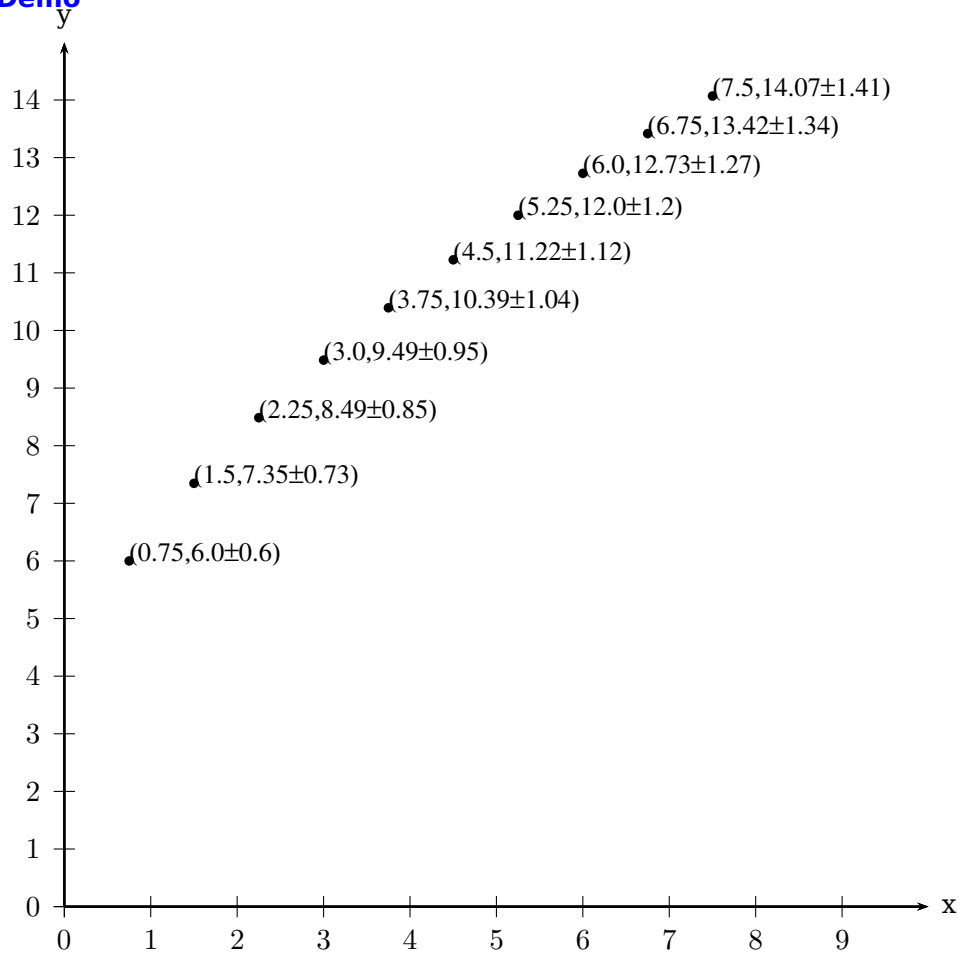


```

\begin{psgraph}[arrows=->,Dx=1,Dy=1,xsubticks=1,ysubticks=1](0,0)(0,0)(15,30){4.5in}{4.5in}
\listplot[plotstyle=line,plotNoMax=2,plotNo=1]{\LinearA}
\listplot[plotstyle=line,plotNoMax=2,plotNo=2]{\LinearA}
\listplot[plotstyle=line,linestyle=dashed,plotNoMax=2,plotNo=1,plotNoTwo=2,plotNoTwoFunc=
  add 2 div]{\LinearA}
\rput[lb](10,18){1st Column}
\rput[lb](10,29){2nd Column}
\rput[lb](10,24){Average of 1st and 2nd Columns}
\end{psgraph}

```

11 PrintCoor Demo



```

\begin{psgraph}[arrows=->,Dx=1,Dy=1,xsubticks=1,ysubticks=1](0,0)(0,0)(10,15){4.5in}{4.5in}
%PrintCoor Demo
\psset{xEnd=,xStart=,decimals=2,valuewidth=50,fontscale=10,PstDebug=1}
\pstScalePoints(1,1){0.75 mul}{0.5 exp 3 mul}
\listplot[plotstyle=PrintCoor,plotNoMax=1,plotNo=1,PstDebug=0,relxerr=0,rellyerr=0.1]{\
  Linear}
\listplot[plotstyle=dots,plotNoMax=1,plotNo=1]{\Linear}
\pstScalePoints(1,1){}{}
\end{psgraph}

```

12 List of all optional arguments for pst-fit

Key	Type	Default
symbolFont	ordinary	[none]
ScyBase	boolean	true
ScxBase	boolean	true
plotNoTwo	ordinary	[none]
plotNoTwoFunc	ordinary	[none]
relxerr	ordinary	[none]
relyerr	ordinary	[none]
yShift	ordinary	[none]
science	boolean	true
EqPos	ordinary	
MaPos	ordinary	
MaScale	ordinary	
ShowEq	boolean	true
PolyOrder	ordinary	
ReduceOrder	boolean	true
PowerFit	boolean	true
LogEFit	boolean	true
LogTFit	boolean	true
ExpFit	boolean	true
GaussFit	boolean	true
RecipFit	boolean	true
CustomFit	boolean	true
FXtrans	ordinary	
FYtrans	ordinary	
RYtrans	ordinary	
Yint	ordinary	
CheckZeroX	ordinary	
CheckZeroY	ordinary	

References

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- [3] Alan Hoenig. *T_EX Unbound: L^AT_EX & T_EX Strategies, Fonts, Graphics, and More*. London: Oxford University Press, 1998.
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