GeoGebra Tutorial: Percentage Change

No.	Toolbar Icon	Command	Remarks
1.		n=400	
2.	a=1	<pre>inputBox1=InputBox(n)</pre>	Caption: Original value = Box length=4 Medium size
3.		poly1=Polygon((0,0),(10,0),(10,1),(0,1))	Color: red
4.		<pre>list1=Sequence(Segment((0.1*i,0), (0.1*i,1)),i,1,99)</pre>	Color: black Line Thickness=2
5.		<pre>list2=Sequence(Segment((i,0),(i,1)), i,1,9)</pre>	Color: black Line Thickness=4
6.		A=Point(Sequence((0.1*i,-1),i,0,200))	Show Label: Caption: Drag
7.		poly2=Polygon((0,0),(0,-1),A,(x(A),0))	Color: blue
8.		<pre>list3=Sequence(Segment((0.1*i,-1), (0.1*i,0)),i,1,x(A)*10)</pre>	Color: black Line Thickness=2
9.		<pre>list4=Sequence(Segment((i,-1),(i,0)), i,1, floor(x(A)))</pre>	Color: black Line Thickness=4
10.		Insert a checkbox named divide with caption: Divide original value into 100 equal portions	Hide axes and grid.
		Set "Condition to Show Object" of list1, list2, list3 and list4: divide	See Figure 1.
11.		change=(x(A)-10)*10	
12.		n'=n(1+change/100)	
13.		<pre>text1=Text(n)</pre>	Position: (5,0.5)
14.		<pre>text2=Text(n')</pre>	Position: (x(A)/2,-0.5)
15.	ABC	<pre>\text{Percentage Change}\\ =\frac{ n' - n }{ n } *100%\\ =\frac{ n'-n }{ n } *100%\\ = change %</pre>	LaTex formula Medium size Absolute Position on Screen See Figure 2.
16.	ABC	<pre> Percentage If(change>=0,</pre>	LaTex formula Medium size Bold Absolute Position on Screen See Figure 3.

No.	Toolbar Icon	Command	Remarks
17.	OK	Insert a button named button1:	Caption: Random
	UK	On Click Scripts:	original
		<pre>SetValue(n,RandomElement(Sequence(i*10,</pre>	value
		i,1,50)))	See Figure 4.
		SetValue(A,(10,-1))	
		SetValue(divide,false)	
18.		Hide C. Press Ctrl+Shift+D to toggle "Selection	See Figure 5 and
		Allowed" for all objects except points and lists.	Figures 6.
		Uncheck "Selection Allowed" for the four lists.	

A more sophisticated version of this applet is available on https://ggbm.at/Xe73OGlj .



Figure 1

Edit				
\text{Percentage Change}\\				
= $\frac{n' - n}{n} \leq n \leq 100\%$				
$= \frac{n' - n}{n} \leq n \leq 100\%$				
= change %				
✓ LaTeX formula • Symbols • Objects •				
Χ Π Ι Ι Ι Ι Ι Ι Ι Ι Ι				
Preview				
Percentage Change				
$=\frac{584400}{400}\times100\%$				
$=\frac{184}{400} \times 100\%$				
=46%				
Cancel				





Caption: Random orginal value GeoGebra Script: 1 SetValue[n,RandomElement[Sequence[i*10,i,1,50]]] 2 SetValue[A,(10,-1)] 3 SetValue[divide,false] OK Cancel

Figure 4



Figure 5

