TECHNOLOGY CORNER

26. Chi-square test for goodness of fit with HP Prime

You can use the HP Prime to perform the calculations for a chi-square test for goodness of fit. We'll use the data from the hockey and birthdays example to illustrate the steps.

- Press Area and tap the *Inference* app icon. The app opens in Symbolic view.
- Tap the Method field and select X² test.
- By default, the Type field is set to Goodness of Fit; if it is not, tap it and make this selection.
- The Expected field lets you select to provide either expected counts or probabilities. For this example, we choose to provide the probabilities. The completed Symbolic view appears below.

Inference Symbolic View 09:27				
Method:	χ² test	٣		
Type:	Goodness of Fit	٣		
Expected:	Probability	*		
Choose expect	ed data value			
Choos	e l			

 Press I to enter Numeric view. You will see two lists: ObsList for the observed counts and ProbList for the expected probabilities. Enter the four observed counts in ObsList and the four equal probabilities in ProbList. The data can be found on Page 688. The completed Numeric view is shown below.

	Inference Numeric View 09:34			
	ObsList	ProbList		
1	32	0.25		
2	20	0.25		
3	16	0.25		
4	12	0.25		
5				
6				
7				
8				
9				
10				
Enter value or expression				
	Edit Ins	Size Calc		

Tap Calc to see the results shown below.
The X² value is displayed, along with its associated probability and the degrees of freedom.

	Stats	09:36
Х		
χ ²	11.2	
P	0.01069212909	
DF	3	
11.2		
Stats•	Exp Cont Size	OK

Tap **Exp** to see the expected counts.

		Sta	ts	09:38
Х				
	20			
	20			
	20			
	20			
0				
Stats	Exp•	Cont	Size	 OK

Tap **Cont** to see the X² contributions by category. Tap **K** when you are done.

		Stat	İS	09:40
Х				
1	7.2			
2	0			
3	0.8			
4	3.2			
1.2				
Stats	Exp	Cont•	Size	OK

The results agree with our previous calculations.