



HP41CX Program Listing

Title:	Human body temperature
Program Label:	LBL "TP" / 53 bytes
Version:	1.1
Date:	23/12/1990

Description

Calculates the Centigrade equivalent to a Fahrenheit reading obtained from a digital clinical thermometer.

It also compares the resultant conversion with a fixed average body temp obtained when healthy and displays the change along with the conversion.

I wrote this because, like most Europeans, I like temperatures in Centigrade but there are times when a Centigrade reading thermometer is not available. If you are taking your temperature it's probably because you are ill and then the difference with your normal temperature can be very useful.

Core Logic

Straight conversion using the following formula:

$$^{\circ}\text{C} = 0.5556 \times (^{\circ}\text{F} - 32)$$

The value of normal body temp stored in the program at line 12 is then subtracted from the result to determine any change (unfortunately usually an increase) and the amount of it.

For those looking more closely, yes, I'm a reptile.

Execution

Call the program and in response to the **F TEMP?** prompt, enter the reading from the thermometer.

Touch **R/S** and the conversion to centigrade will be displayed along with the increase above normal (if any).

Touch **R/S** to perform another run.

Program listing follows:



Line	Instruction	Comments
1	LBL "TP"	
2	"F TEMP?"	Enter Fahrenheit reading
3	PROMPT	
4	FIX 1	
5	32	Calculate centigrade
6	-	
7	0.56	
8	*	
9	CLA	
10	ARCL X	
11	append: " C "	
12	36.232	Calc amount above normal
13	-	
14	X>0?	Add to display
15	append: "+"	
16	ARCL X	
17	PROMPT	Display final result
18	↑ GTO "TP"	Loop back for next reading
19	END	

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