Prime Factorization for the HP-12C model

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Contents

1 Prime Factorization HP-12C code

key strokes	step	display code(s)	remark
ON			Switch the calculator ON
f P/R			Enter program mode
f CLEAR PRGM			Clear all program memory
STO 0	01	44 0	Save input
2	02	2	
STO 1	03	44 1	Save first prime
STO 2	04	44 2	Save first prime
RCL 0	05	45 0	Read working number
RCL 1	06	45 1	Read prime
÷	07	10	
ENTER	08	36	
g FRAC	09	43 24	
g X=0	10	43 35	X=0?
g GTO 29	11	43,33 29	
1	12	1	
STO + 1	13	44 40 1	
RCL 2	14	45 2	
$x \lessgtr y$	15	34	
g X≤Y	16	43 34	
g GTO 21	17	43,33 21	

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key strokes		step	display code(s)	remark
1		18	1	
STO 2		19	44 2	
STO + 1		20	44 40 1	
RCL 0		21	45 0	Read working number
RCL 1		22	45 1	Read prime
ENTER		23	36	
×		24	20	x^2
g X⩽Y		25	43 34	
g GTO 05		26	43,33 05	and loop
RCL 0		27	45 0	Read last and biggest prime
g GTO 00		28	43,33 00	End program
RCL 1		29	45 1	Display prime factor
g PSE		30	43 31	and pause one second
R↓		31	33	
R↓		32	33	Get register Z
STO 0		33	44 0	
g GTO 05		34	43,33 05	and loop
g P/R				Leave program mode

2 How to use the Prime Factorization program

Enter number N and run with R/S. The program will show all the prime factors of N from a low prime (2) and then up.

Example:
```
  10
 R/S
```

Output:

running

2.00   *(pause one second)*

running

5.00