

Program Description I

Program Title "HOW OLD ARE YOU?"

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Program Description, Equations, Variables

Given the PRESENT DATE (or any other date) and a BIRTHDATE, this program will compute the following:

(1) PRESENT AGE

(2) NUMBER of DAYS to NEXT BIRTHDAY

(3) AGE on NEXT BIRTHDAY.

Operating Limits and Warnings

If you use a "PRESENT" DATE other than "TODAY'S DATE," it must not be EARLIER than the BIRTHDATE or you will not have been born yet!!

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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Sketch(es)

Sample Problem(s) Given TODAY'S DATE as JUNE 26, 1979,
compute the PRESENT AGE, NUMBER OF DAYS to NEXT BIRTHDAY,
and AGE on NEXT BIRTHDAY for each given BIRTHDATE.

#1) OCT. 29, 1945

#2) JULY 4, 1950

#3) FEB. 12, 1952

#4) SEPT. 18, 1919

Solution(s) 6.26.1979 [A] → 6.26.1979

#1) 10.29.1945 [B] → BIRTH DATE, 33.0 [E] → 125.***, 34.0

#2) 7.04.1950 [B] → BIRTH DATE, 28.0 [E] → 8.***, 29.0

#3) 2.12.1952 [B] → BIRTH DATE, 27.0 [E] → 257.***, 28.0

#4) 9.18.1919 [B] → BIRTH DATE, 59.0 [E] → 83.***, 60.0

Reference(s)

HOW OLD ARE YOU?

TODAY'S DATE BIRTHDATE → AGE NEXT BIRTHDAY: # of DAYS, AGE

STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1	Load Sides 1+2 of PROGRAM CARD.			
2	Input TODAY'S DATE (ALL DATES USED MUST BE IN THE FORM MM.DD.YYYY, WHERE MM = MONTH DD = DAY YYYY = YEAR.)	TODAY'S DATE	A	TODAY'S DATE
3	Input a BIRTHDATE.	BIRTH DATE	B	BIRTH DATE AGE RIGHT NOW
4	Compute the NUMBER of DAYS to your NEXT BIRTHDAY and your AGE on the NEXT BIRTHDAY		E	# of DAYS to NEXT BIRTHDAY AGE on NEXT BIRTHDAY.
5	To REPEAT CALCULATIONS using same given DATES simply press [B] or [E]			
6	For a new "PRESENT DATE" [GTO] STEP 2			
7	For a new BIRTHDATE [GTO] STEP 3 and STEP 4			

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001 A	LBL A	31 25 11	STORE TODAY'S DATE		HRTN	35 22	
	STOE	33 15			GTO B	22 12	
	DSP G	23 06		E	LBL E	31 25 15	NEXT BIRTHDAY:
	HCF 3	35 61 03		060	DSP 2	23 02	# of DAYS, AGE
	HRTN	35 22			3	03	
B	LBL B	31 25 12	BIRTHDATE → AGE		0	00	
	DSP G	23 06			.	83	
	H F? 3	35 71 03			4	04	
	STOA	33 11			3	03	
010	RCLA	34 11			7	07	
	H PAUSE	35 72			5	05	
	EEX	43	SEPARATE BIRTHDATE		STO 7	33 07	
	2	02	INTO COMPONENTS.		RCL 1	34 01	
	X	71		070	STO 3	33 03	
	FINT	31 83			RCL D	34 14	
	STO B	33 12			RCL 4	34 04	
	H LASTX	35 82			-	51	
	GFRAC	32 83			FX < 0	31 71	
	EEX	43			GTO 1	22 01	
020	4	04			STO 8	33 08	
	X	71			FINT	31 83	
	STO C	33 13			RCL 7	34 07	
	RCL B	34 12			X	71	
	EEX	43		080	STO 6	33 06	
	2	02			RCL 8	34 08	
	÷	81			GFRAC	32 83	
	STO D	33 14			F DSP 2	31 22 02	
	RCL E	34 15	SEPARATE TODAY'S DATE		EEX	43	
	EEX	43	INTO COMPONENTS		2	02	
030	2	02			X	71	
	X	71			H F? 2	35 71 02	
	FINT	31 83			CHS	42	
	STO 2	33 02			STO + 6	33 61 06	
	H LASTX	35 82		090 3	LBL 3	31 25 03	COMPLETE LBL E
	GFRAC	32 83			RCL 6	34 06	
	EEX	43			DSP 0	23 00	
	4	04			FRND	31 24	
	X	71			F - X -	31 84	
	STO 3	33 03			RCL 3	34 03	
040	STO 1	33 01			RCL C	34 13	
	RCL 2	34 02			-	51	
	EEX	43			DSP 1	23 01	
	2	02			HRTN	35 22	
	÷	81		100	GTO E	22 15	
	STO 4	33 04		1	LBL 1	31 25 01	NEXT BIRTHDAY IS
	RCL 3	34 03			RCL D	34 14	NEXT YEAR!
	RCL C	34 13			GFRAC	32 83	
	-	51			RCL 4	34 04	
	HSTOI	35 33			GFRAC	32 83	
050	RCL 2	34 02			-	51	
	RCL B	34 12			HABS	35 64	
	G X > Y	32 81			EEX	43	
	F DSZ	31 33			2	02	
	H RCL I	35 34		110	X	71	
	H RCL I	35 34			STO 5	33 05	
	DSP 1	23 01			RCL E	34 15	

SEPARATE BIRTHDATE
INTO COMPONENTS.

SEPARATE TODAY'S DATE
INTO COMPONENTS

CURRENT YEAR
- BIRTH YEAR
STO R1 (AGE)

Is $R_B > R_2$?
If YES, DSZ R1

$365.25 \div 12$

If $X < 0$, this year's
birthday has passed!
GTO 1

of MONTHS X 30.4375
+ # of DAYS =
of DAYS REMAINING

$R_3 - R_C = \text{AGE}$

NEXT BIRTHDAY IS
NEXT YEAR!

REGISTERS

0	1 TODAY'S DATE YYYY.	2 TODAY'S DATE MMDD.	3 TODAY'S DATE YYYY.	4 TODAY'S DATE MM-DD	5 USED	6 USED	7 30.4375	8 $R_D - R_4$	9
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A BIRTHDATE MM.DDYYYY	B BIRTHDAY MMDD.	C BIRTHDAY YYYY.	D BIRTHDAY MM-DD	E TODAY'S DATE MM.DDYYYY	I USED				

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LABELS					FLAGS	SET STATUS			
A TODAY'S DATE	B BIRTH DATE → AGE	C	D	E NEXT 3. DATE → # of DAYS, AGE	0	FLAGS		TRIG	DISP
a	b	c	d	e	1	0	☐ ON ☒ OFF	DEG ☒	FIX ☒
0	1 NEXT 5. D. is NEXT YEAR	2 ADJUST DAYS	3 COMPLETE WBLE	4	2 USED	1	☐	GRAD ☐	SCI ☐
5	6	7	8	9	3	2	☐	RAD ☐	ENG ☐
						3	☐		n <u>2</u>