

## Commander in Chief

### A Game for the TI-58 Programmable Calculator

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Commander in Chief is a TI-58 snowball war game for one player (see listing 1). After entering the program, press E. This clears the memory and initializes the random number generator (program 15 in the library module). You are now ready to play. Enter the number of snowballs you want up to 100 and push A. If you try to enter more than 100 snowballs, the program will place only 100 snowballs in your register. No iceballs allowed.

After a few seconds, the calculator will come back with a 1 or a flashing 1. If the display flashes, you are at war. Next, you estimate how many snowballs the enemy has and push B. The display will flash how many snowballs the enemy actually has. Following this, it will display a 1, 0 or -1 and then the year number; or the display will flash 9.9999999 99. If this occurs, there has been a holocaust and the enemy is rendered inoperative. If there is no holocaust, the 1, 0 or -1 tells you whether you have won, achieved a standoff, or lost; then the year number is displayed. You and your enemy have lost half of your snowballs and each of you will add more on the next year.

If there is no war at all during the year, you have the option of declaring war. The procedure is the same as that in which the enemy has declared war. If you can make it through ten years, you win the Snobel Peace Prize. ■

#### ACKNOWLEDGEMENTS

"Commander in Chief," *The Pocket Calculator Game Book*, Schlossberg and Brockman, Bantam Books, 1976.

Thanks to David Nahakian for helping me with some of the program sequences.

### Sample Game

Year	Your Total Snowballs	Total Enemy Snowballs (not seen)
1 (No war, go on to the next year)	100	68
2 (No war)	180	127
3	260	209

(Enemy declares war. Player estimates 191 snowballs, an error of 18. This is multiplied by the actual enemy snowballs and the number of his snowballs. The resulting holocaust factor is 978,120. The holocaust factor needed to cause a holocaust is 1,500,000. There has been no holocaust, so each power loses half his/her snowballs, discarding fractions. Player wins.)

4 (No war)	130	104
5 (No war)	230	197
6	330	224

(Player declares war and estimates 251 enemy snowballs, an error of 27. The holocaust factor is 1,995,840. There has been a holocaust; and both sides are blitzed.)

Loc.	Keys						Commentary
000	*Lbl	E	*CM's	*Pgm	15	E	Random number generator.
006	*Pgm	15	*E'	R/S	*Lbl	A	
012	x $\rightarrow$ t	1	0	0	x $\geq$ t	—	100 is maximum number of snowballs
018	x $\rightarrow$ t	*Lbl	—	x $\rightarrow$ t	SUM	00	added is one turn.
024	1	STO	10				Lower limit
027	1	0	1	STO	11		Upper limit
032	*Pgm	15	C	*Int	SUM	13	Add enemy snowballs
038	1	3	STO	11			
042	15	C	STO	20			
046	9	x $\rightarrow$ t	RCL	20	*x $\geq$ t		War ?
051	*x	*Lbl	+	1	SUM	21	
057	RCL	21	R/S	*Lbl	B	—	
063	RCL	13	*Pause	=	x		Enemy snowballs flash
068	(	CE	X	RCL	00	X	Holocaust factor
		RCL	13	)			
077	STO	15					
079	1	5	0	0	0	0	Maximum holocaust factor
		0					
086	x $\rightarrow$ t	RCL	15	*x $\geq$ t	lnx	RCL	
092	13	—	2	=	*Int	STO	
098	13	RCL	0	$\div$	2	=	
104	*Int	STO	0	—	RCL	13	
110	=						
111	*Op	10					Signum function (Who won ?)
113	*Pause	Pause	RCL	21	GTO	+	
119	*Lbl	*x	CLR	$\div$	=	RCL	Flash year number
		21	R/S				
127	*Lbl	lnx	CLR	1/x	*CM's	R/S	You are rendered inoperative!

*Listing 1: Commander in Chief, a game for the Texas Instruments TI-58 programmable calculator. Note that some of the operations of this TI calculator series allow multikey entries into one location. This is indicated by an asterisk within the key.*