

Program Description I

Program Title

BATTLESHIP I

Contributor's Name

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Program Description, Equations, Variables

This program chooses 3 battleship locations on a 6x6 grid, each location is 2 spaces long either horizontally or vertically, and you also choose your battleship locations, you each then take turns trying to sink each others battleships. The HP will not choose the same space twice and when a hit is made it will search out the rest of the ship until it is sunk.

Shots are entered as X.Y

X is the row number and Y is the column number (see the sketch)

When a hit is made you get another turn

Operating Limits and Warnings

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)

	1	2	3	4	5	6
1						
2			B	B		
3						B
4		B				B
5		B				
6						

Sample Problem(s)

Set up Battle your positions ~~as~~ as shown above.Random number
seed

	Enter	Key	Output	Comment	Enter	Key	Output	Comment
24.37	31	F	A	0.0	HP Chooses locations			
	1.3	A	0.0	you missed				
		B	2.4	HP Hits you				
		C	2.5	HP misses				
	4.1	A	0.0	you missed				
		B	2.3	HP Hits you ^{+sunk ship}				
		C	4.5	HP misses				
	4.4	A	1.0	you Hit HP				
	3.4	A	1.0	you Hit HP ^{+sunk ship}				
	6.3	A	0.0	you missed				

Solution(s)

		B	4.4	HP misses				
	5.2	A	0.0	you missed				
		B	5.5	HP misses				
	2.2	A	0.0	you missed				
		B	4.3	HP misses				

Continue game until either your ships or HP's ships are sunk

Reference(s)

Program Listing I

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STEP 4090

KEY ENTRY

KEY CODE

COMMENTS

STEP

KEY ENTRY

KEY CODE

COMMENTS

001 *LBLE 21 15 11
002 F28 15-51
003 CLRE 16-53
004 F28 16-51
005 STOE 35 15
006 *LBLE 21 05
007 2 02
008 STOE 35 00
009 GSBF 23 15
010 GSBF 23 00
011 X#07 16-42
012 GTOF 22 05
013 RCL8 36 08
014 GSBF 23 00
015 X#07 16-42
016 GTOF 22 05
017 RCL8 36 08
018 GSBF 23 16 12
019 RCLD 36 14
020 GSBF 23 16 12
021 *LBLE 21 05
022 GSBF 23 15
023 GSBF 23 00
024 X#07 16-42
025 GTOF 22 08
026 RCL8 36 08
027 GSBF 23 00
028 X#07 16-42
029 GTOF 22 08
030 RCL8 36 08
031 GSBF 23 16 12
032 RCLD 36 14
033 GSBF 23 16 12
034 *LBLE 21 05
035 4 04
036 STOE 35 00
037 GSBF 23 15
038 GSBF 23 00
039 X#07 16-42
040 GTOF 22 09
041 RCL8 36 08
042 GSBF 23 00
043 X#07 16-42
044 GTOF 22 09
045 RCL8 36 09
046 GSBF 23 15 12
047 RCLD 36 14
048 GSBF 23 15 12
049 RCL8 36 15
050 CLRE 16-53
051 STOE 35 15
052 0 00
053 RTN 24
054 *LBLE 21 15
055 GSBF 23 15 14
056 STOF 35 09

057 GSBF 23 16 14
058 1 01
059 0 00
060 = -24
061 ST-9 35-55 09
062 RCL8 36 08
063 1 01
064 0 00
065 + -55
066 STOE 35 00
067 RCL8 36 08
068 STOI 35 46
069 RCL8 36 09
070 GSBF 23 45
071 STOF 35 07
072 1 01
073 0 00
074 + -55
075 STOE 35 14
076 RTN 24
077 *LBLE 21 16 14
078 GSBF 23 16 13
079 7 07
080 = -24
081 6 06
082 X -35
083 INT 16 34
084 X#07 16-43
085 GSBF 23 03
086 GSBF 23 03
087 RTN 24
088 *LBLE 21 11
089 1 01
090 0 00
091 + -55
092 GSBF 23 00
093 RTN 24
094 *LBLE 21 12
095 RCL7 36 07
096 X#07 16-42
097 GTOF 22 14
098 GSBF 23 15 13
099 STOF 35 09
100 GSBF 23 15 13
101 1 01
102 0 00
103 = -24
104 ST-9 35-55 09
105 RCL8 36 09
106 GSBF 23 00
107 X#07 16-42
108 GTOF 22 12
109 RCL8 36 09
110 GSBF 23 15 12
111 RTN 24
112 *LBLE 21 13

REGISTERS

0	1 HP SHOTS ROW 1	2 HP SHOTS ROW 2	3 HP SHOTS ROW 3	4 HP SHOTS ROW 4	5 HP SHOTS ROW 5	6 HP SHOTS ROW 6	7 Counter	8 Counter	9 used
S0	S1 HP SHIP Locations ROW 1	S2 HP SHIP Locations ROW 2	S3 HP SHIP Locations ROW 3	S4 HP SHIP Locations ROW 4	S5 HP SHIP Locations ROW 5	S6 HP SHIP Locations ROW 6	S7	S8	S9
A used	B		C		D		E Random No.		I used

Program Listing II

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-00499D

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	.	01		159	-	-45	
114	ST+7	35-55 07		170	RTN	24	
115	*LBLD	21 14		171	*LBLC	21 16 13	
116	.	01		172	RCLE	35 15	
117	ST+8	35-55 08		173	FI	16-24	
118	RCL7	36 07		174	X	-35	
119	2	02		175	XK	54	
120	X=Y?	16-33		176	EEX	-23	
121	GT0e	22 16 15		177	3	03	
122	RCL8	36 08		178	X	-35	
123	STOI	35 46		179	FRC	16 44	
124	RCL9	36 09		180	STOE	35 15	
125	GSEI	23 45		181	7	07	
126	STOA	35 11		182	X	-35	
127	INT	16 34		183	INT	16 34	
128	X=0?	16-43		184	X=0?	16-43	
129	GTOD	22 14		185	GT0c	22 16 13	
130	7	07		186	RTN	24	
131	X=Y?	16-33		187	*LBL0	21 00	
132	GTOD	22 14		188	STOA	35 11	
133	RCLA	35 11		189	INT	16 34	
134	FRC	16 44		190	STOI	35 46	
135	X=0?	16-43		191	RCL7	36 45	
136	GTOD	22 14		192	STOB	35 12	
137	.	-62		193	RCLA	36 11	
138	7	07		194	FRC	16 44	
139	X=Y?	16-33		195	1	01	
140	GTOD	22 14		196	0	00	
141	RCLA	35 11		197	X	-35	
142	GSEB	23 00		198	1	01	
143	X=0?	16-42		199	-	-45	
144	GTOD	22 14		200	10*	16 33	
145	RCLA	36 11		201	RCLB	36 12	
146	GSEB	23 16 12		202	X	-35	
147	RTN	24		203	FRC	16 44	
148	*LBLc	21 16 15		204	1	01	
149	0	00		205	0	00	
150	STOF	35 07		206	X	-35	
151	STOB	35 08		207	INT	16 34	
152	GTOD	22 12		208	RTN	24	
153	*LBL1	21 01		209	*LBLA	21 16 12	
154	.	-62		210	STOA	35 11	
155	1	01		211	INT	16 34	
156	-	-55		212	STOI	35 46	
157	RTN	24		213	LSTX	16-63	
158	*LBL2	21 02		214	FRC	16 44	
159	.	-62		215	1	01	
160	1	01		216	0	00	
161	-	-45		217	X	-35	
162	RTN	24		218	10*	16 33	
163	*LBL3	21 03		219	1/X	52	
164	1	01		220	ST+7	35-55 45	
165	-	-55		221	RCLA	36 11	
166	RTN	24		222	RTN	24	
167	*LBL4	21 04					
168	1	01					

LABELS					FLAGS	SET STATUS		
A your SHOT	B HWP's SHOT	C HIT	D	E	0	FLAGS	TRIG	DISP
a CI reg	b store by row	c Random No	d Boundary	e O counters	1	ON OFF		
STO Random No	+column	Gen.	Control			0 ☐ ☐	DEG ☐	FIX ☐
0 check row	1 + . 1	2 - . 1	3 + 1	4 - 1	2	1 ☐ ☐	GRAD ☐	SCI ☐
+column No						2 ☐ ☐	RAD ☐	ENG ☐
5 HWP SHIP #1	6	7	8 HWP SHIP #2	9 HWP SHIP #3	3	3 ☐ ☐		n _____