

# 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 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 <sup>+sunk ship</sup>				
		C	4.5	HP misses				
	4.4	A	1.0	you Hit HP				
	3.4	A	1.0	you Hit HP <sup>+sunk ship</sup>				
	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 1

JOB 489P		KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
REGIONS								
0	1HP 5HOTS	2HP 5HOTS	3HP 5HOTS	4HP 5HOTS	5HP 5HOTS	6HP 5HOTS	7counter	8counter
0	Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 7	Row 8
S0	S1HP 5HIP Locations	S2HP 5HIP Locations	S3HP 5HIP Locations	S4HP 5HIP Locations	S5HP 5HIP Locations	S6HP 5HIP Locations	S7	S8
A	used	B	C	D	E	Random No.	I	used
001	*LEL9	21 15 11			057	6984	23 16 14	
002	F+3	15-51			058	1	01	
003	CLR6	16-53			055	0	00	
004	F+3	16-51			060	=	-24	
005	STOE	35 15			061	ST-9	35-55 09	
006	*LEL5	21 05			062	RL5	26 09	
007	1	02			063	1	01	
008	STOE	35 06			064	0	00	
009	698E	23 15			065	+	-55	
010	6980	23 06			066	STOE	35 08	
011	X#03	16-42			067	RL0	36 08	
012	6T05	22 05			068	STOT	35 46	
013	RL6	35 09			069	RL9	36 09	
014	6980	23 06			070	6981	23 45	
015	X#03	16-42			071	STOT	35 07	
016	6T05	22 05			072	1	01	
017	RL3	35 08			073	0	00	
018	6984	23 16 12			074	+	-55	
019	RLD	36 14			075	STOD	35 14	
020	6984	23 16 12			076	RLH	24	
021	*LEL6	21 05			077	*LEL4	21 16 14	
022	698E	23 15			078	6980	23 16 13	
023	6980	23 00			079	7	07	
024	X#03	16-42			080	=	-24	
025	6T06	22 08			081	6	06	
026	RL6	35 08			082	X	-35	
027	6980	23 00			083	INT	16 34	
028	X#03	16-42			084	X=00	16-43	
029	6T06	22 06			085	6983	23 03	
030	RL6	36 08			086	6982	23 03	
031	6986	23 16 12			087	RLH	24	
032	RLD	36 14			088	*LEL4	21 11	
033	6986	23 16 12			089	1	01	
034	*LEL9	21 09			090	0	00	
035	4	04			091	+	-55	
036	STOE	35 00			092	6980	23 00	
037	698E	23 15			093	RLH	24	
038	6980	23 00			094	*LEL6	21 12	
039	X#03	16-42			095	RL7	36 07	
040	6T09	22 09			096	X#03	16-42	
041	RL6	36 08			097	6T00	22 14	
042	6980	23 00			098	6984	23 16 13	
043	X#03	16-42			099	STOE	35 09	
044	6T05	22 09			100	6980	23 16 12	
045	RL8	35 09			101	1	01	
046	6984	23 16 12			102	0	00	
047	RLD	36 14			103	=	-24	
048	6986	23 16 12			104	ST+9	35-55 09	
049	RL6	36 15			105	RL9	36 09	
050	CLR6	16-53			106	6980	23 00	
051	STOE	35 15			107	X#03	16-42	
052	0	00			108	6T08	22 12	
053	RLH	24			109	RL9	36 09	
054	*LEL6	21 15			110	6984	23 16 12	
055	6984	23 16 14			111	RLH	24	
056	STOE	35 09			112	*LEL6	21 13	

# Program Listing II

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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	STO7	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 <input type="checkbox"/> <input type="checkbox"/>	DEG <input type="checkbox"/>	FIX <input type="checkbox"/>
0 check row	1 + . 1	2 - . 1	3 + 1	4 - 1	2	1 <input type="checkbox"/> <input type="checkbox"/>	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
+column No						2 <input type="checkbox"/> <input type="checkbox"/>	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>
5 HWP SHIP #1	6	7	8 HWP SHIP #2	9 HWP SHIP #3	3	3 <input type="checkbox"/> <input type="checkbox"/>		n _____