

Expanding Square Search Patterns

Time Tables

Expanding Square

1/16 mile visibility

Legs increase in increments of 1/8 mile (with observer on each side of boat)

Speed	Leg 1 & 2 (1/8 mile)	Leg 3 & 4 (1/4 mile)	Leg 5 & 6 (3/8 mile)	Leg 7 & 8 (1/2 mile)	Leg 9 & 10 (5/8 mile)	Leg 11 & 12 (3/4 mile)	Leg 13 & 14 (7/8 mile)	Leg 15 & 16 (1 mile)	Total Time
5 mph	0:01:30	0:03:00	0:04:30	0:06:00	0:07:30	0:09:00	0:10:30	0:12:00	1:48:00
6 mph	0:01:15	0:02:30	0:03:45	0:05:00	0:06:15	0:07:30	0:08:45	0:10:00	1:30:00
10 mph	0:00:45	0:01:30	0:02:15	0:03:00	0:03:45	0:04:30	0:05:15	0:06:00	0:54:00
12 mph	0:00:38	0:01:15	0:01:45	0:02:30	0:03:08	0:03:45	0:04:08	0:05:00	0:44:18
15 mph	0:00:30	0:01:00	0:01:30	0:02:00	0:02:30	0:03:00	0:03:30	0:04:00	0:36:00
20 mph	0:00:22	0:00:45	0:01:07	0:01:30	0:01:57	0:02:15	0:02:39	0:03:00	0:27:10
30 mph	0:00:15	0:00:30	0:00:45	0:01:00	0:01:15	0:01:30	0:01:45	0:02:00	0:18:00

1/8 mile visibility

Legs increase in increments of 1/4 mile (with observer on each side of boat)

Speed	Leg 1 & 2 (1/4 mile)	Leg 3 & 4 (1/2 mile)	Leg 5 & 6 (3/4 mile)	Leg 7 & 8 (1 mile)	Leg 9 & 10 (1 1/4 mile)	Leg 11 & 12 (1 1/2 mile)	Leg 13 & 14 (1 3/4 mile)	Leg 15 & 16 (2 miles)	Total Time
5 mph	0:03:00	0:06:00	0:09:00	0:12:00	0:15:00	0:18:00	0:21:00	0:24:00	3:36:00
6 mph	0:02:30	0:05:00	0:07:30	0:10:00	0:12:30	0:15:00	0:17:30	0:20:00	3:00:00
10 mph	0:01:30	0:03:00	0:04:30	0:06:00	0:07:30	0:09:00	0:10:30	0:12:00	1:48:00
12 mph	0:01:15	0:02:30	0:03:45	0:05:00	0:06:15	0:07:30	0:08:45	0:10:00	1:30:00
15 mph	0:01:00	0:02:00	0:03:00	0:04:00	0:05:00	0:06:00	0:07:00	0:08:00	1:12:00
20 mph	0:00:45	0:01:30	0:02:15	0:03:00	0:03:45	0:04:30	0:05:15	0:06:00	0:54:00
30 mph	0:00:30	0:01:00	0:01:30	0:02:00	0:02:30	0:03:00	0:03:30	0:04:00	0:36:00

1/4 mile visibility

Legs increase in increments of 1/2 mile (with observer on each side of boat)

Speed	Leg 1 & 2 (1/2 mile)	Leg 3 & 4 (1 mile)	Leg 5 & 6 (1 1/2 mile)	Leg 7 & 8 (2 miles)	Leg 9 & 10 (2 1/2 mile)	Leg 11 & 12 (3 miles)	Leg 13 & 14 (3 1/2 miles)	Leg 15 & 16 (4 miles)	Total Time
5 mph	0:06:00	0:12:00	0:18:00	0:24:00	0:30:00	0:36:00	0:42:00	0:48:00	7:12:00
6 mph	0:05:00	0:10:00	0:15:00	0:20:00	0:25:00	0:30:00	0:35:00	0:40:00	6:00:00
10 mph	0:03:00	0:06:00	0:09:00	0:12:00	0:15:00	0:18:00	0:21:00	0:24:00	3:36:00
12 mph	0:02:30	0:05:00	0:07:30	0:10:00	0:12:30	0:15:00	0:17:30	0:20:00	2:20:00
15 mph	0:02:00	0:04:00	0:06:00	0:08:00	0:10:00	0:12:00	0:14:00	0:16:00	2:24:00
20 mph	0:01:30	0:03:00	0:04:30	0:06:00	0:07:30	0:09:00	0:10:30	0:12:00	1:48:00
30 mph	0:01:00	0:02:00	0:03:00	0:04:00	0:05:00	0:06:00	0:07:00	0:08:00	1:12:00

1/2 mile visibility

Legs increase in increments of 1 mile (with observer on each side of boat)

Speed	Leg 1 & 2 (1/2 mile)	Leg 3 & 4 (1 mile)	Leg 5 & 6 (1 1/2 mile)	Leg 7 & 8 (2 miles)	Leg 9 & 10 (2 1/2 mile)	Leg 11 & 12 (3 miles)	Leg 13 & 14 (3 1/2 miles)	Leg 15 & 16 (4 miles)	Total Time
5 mph	0:12:00	0:24:00	0:36:00	0:48:00	1:00:00	1:12:00	1:24:00	1:36:00	14:24:00
6 mph	0:10:00	0:20:00	0:30:00	0:40:00	0:50:00	1:00:00	1:10:00	1:20:00	12:00:00
10 mph	0:06:00	0:12:00	0:18:00	0:24:00	0:36:00	0:48:00	1:00:00	1:06:00	9:00:00
12 mph	0:05:00	0:10:00	0:15:00	0:20:00	0:25:00	0:30:00	0:30:00	0:35:00	5:40:00
15 mph	0:04:00	0:08:00	0:12:00	0:16:00	0:20:00	0:24:00	0:28:00	0:32:00	4:48:00
20 mph	0:03:00	0:06:00	0:09:00	0:12:00	0:15:00	0:18:00	0:21:00	0:24:00	3:36:00
30 mph	0:02:00	0:04:00	0:06:00	0:08:00	0:10:00	0:12	0:14:00	0:16:00	2:24:00