

Echolocation: Mystery Topography

Answer key

Station	Distance to Station 1 (miles)	Echo Time (seconds)	Vertical Distance to Ground Below Bat (feet)	Elevation (feet above sea level)	Vertical Distance to Ground Below Bat (meters)	Elevation (meters above sea level)
1	0.00	2.70	1,520	8,480	463	2,585
2	0.50	2.42	1,360	8,640	415	2,633
3	1.25	2.84	1,600	8,400	488	2,560
4	2.00	2.84	1,600	8,400	488	2,560
5	2.80	2.77	1,560	8,440	475	2,573
6	3.75	3.13	1,760	8,240	536	2,512
7	4.60	3.55	2,000	8,000	610	2,438
8	5.00	3.55	2,000	8,000	610	2,438
9	5.40	3.55	2,000	8,000	610	2,438
10	6.40	3.70	2,080	7,920	634	2,414
11	7.00	4.27	2,400	7,600	732	2,316
12	7.50	6.40	3,600	6,400	1,097	1,951
13	7.70	5.69	3,200	6,800	975	2,073
14	8.25	6.68	3,760	6,240	1,146	1,902
15	8.60	6.26	3,520	6,480	1,073	1,975
16	9.10	5.69	3,200	6,800	975	2,073
17	9.30	4.27	2,400	7,600	732	2,316
18	9.50	4.27	2,400	7,600	732	2,316
19	9.90	7.82	4,400	5,600	1,341	1,707
20	10.50	10.66	6,000	4,000	1,829	1,219
21	10.80	9.24	5,200	4,800	1,585	1,463
22	11.25	7.82	4,400	5,600	1,341	1,707
23	11.75	7.89	4,440	5,560	1,353	1,695
24	12.25	10.38	5,840	4,160	1,780	1,268
25	12.75	11.37	6,400	3,600	1,951	1,097
26	13.25	12.80	7,200	2,800	2,195	853
27	13.75	12.09	6,800	3,200	2,073	975
28	14.55	13.65	7,680	2,320	2,341	707
29	15.00	12.23	6,880	3,120	2,097	951
30	15.75	11.73	6,600	3,400	2,012	1,036
31	16.10	8.71	4,900	5,100	1,494	1,554
32	16.40	6.26	3,520	6,480	1,073	1,975
33	16.80	6.40	3,600	6,400	1,097	1,951
34	17.25	6.47	3,640	6,360	1,109	1,939
35	17.50	6.40	3,600	6,400	1,097	1,951
36	17.80	6.54	3,680	6,320	1,122	1,926
37	18.25	6.40	3,600	6,400	1,097	1,951

Height of Bats (English)

10,000 feet above sea level

Height of Bats (Metric)

3,048 meters above sea level

Speed of Sound in Air (English)

1,125 feet / second

Speed of Sound in Air (Metric)

343 meters / second