

High Point Measured From 25.5 Foot Release Point

Values calculated for a shoe released at 3 feet from the ground at a point 25.5 feet from the stake in 6" increments from 4.0 feet to 14.0 feet. The recommended height is approximately 2 feet over the individuals height. Thus, if you were 6 feet tall, your recommended maximum height would be 8 feet and you would place a horizontal string 8 feet above the ground at 11.31 feet from the release point. 45 degrees is the angle that takes the least effort and maximum distance.

Maximum height (in feet)	Time of flight ¹ (in seconds)	Down range location ² (in feet)	Initial velocity ³ (feet per sec)	Initial launch angle ⁴ (in degrees)	Comments
4.0	0.7477	8.53	35.04	13.24	
4.5	0.8339	9.48	32.12	17.82	
5.0	0.9097	9.81	30.24	22.04	
5.5	0.9785	10.16	28.98	25.96	
6.0	1.0421	10.52	28.14	29.60	
6.5	1.1016	10.88	27.59	32.97	
6.8	1.1357	11.00	27.37	34.07	My highpoint
7.0	1.1578	11.01	27.25	36.08	
7.5	1.2112	11.16	27.07	38.96	
8.0	1.2622	11.31	27.02	41.61	
8.5	1.3111	11.28	27.06	44.06	Least Effort
9.0	1.3581	11.45	27.18	46.31	
9.5	1.4035	11.63	27.36	48.39	
10.0	1.4475	11.63	27.59	50.32	
10.5	1.4901	11.64	27.85	52.09	
11.0	1.5315	11.66	28.15	53.74	
11.5	1.5718	11.84	28.47	55.26	
12.0	1.6110	11.87	28.81	56.60	
12.5	1.6493	11.91	29.17	57.99	
13.0	1.6867	11.94	29.54	59.22	
13.5	1.7233	11.99	29.92	60.36	
14.0	1.7591	12.03	30.31	61.43	

- 1. Time of flight** -- The total time from launch to arrival at the stake through the high point.
- 2. Down Range Location** -- The feet from the release point where maximum height is reached. The center of gravity of the shoe needs to pass through this point in flight.
- 3. Initial Velocity** -- The effort needed to launch the shoe to reach 25.5 feet.
- 4. Initial Launch Angle** -- The number of degrees needed to reach the maximum target height. The launch angle is based on the distance between plots.