

Ruler drop table

Measure your response time. Rest your forearm on a table. Have a friend hold the ruler at the 30 cm end, so that your fingers are over the 0 cm mark. Watch the ruler carefully. When your friend lets go, grab the ruler with your fingers without moving your arm. Where you catch it measures how far the ruler has fallen and thus how quickly you can react. This table tells you what your reaction time is and how far your bicycle or an Olympic bobsled will travel in that time.

Distance ruler falls (cm)	Time to fall that distance (s)	A bicycle traveling at 10 mph will go (feet)	A bobsled traveling at 85 mph will go (feet)
0	0.000	0.00	0.0
1	0.045	0.66	5.6
2	0.064	0.94	8.0
3	0.078	1.15	9.8
4	0.090	1.33	11.3
5	0.101	1.48	12.6
6	0.111	1.62	13.8
7	0.120	1.75	14.9
8	0.128	1.87	15.9
9	0.136	1.99	16.9
10	0.143	2.10	17.8
11	0.150	2.20	18.7
12	0.156	2.30	19.5
13	0.163	2.39	20.3
14	0.169	2.48	21.1
15	0.175	2.57	21.8
16	0.181	2.65	22.5
17	0.186	2.73	23.2
18	0.192	2.81	23.8
19	0.197	2.89	24.6
20	0.202	2.96	25.2
21	0.207	3.04	25.8
22	0.212	3.11	26.4
23	0.217	3.18	27.0
24	0.221	3.25	27.6
25	0.226	3.31	28.2
26	0.230	3.38	28.7
27	0.235	3.44	29.3
28	0.239	3.51	29.8
29	0.243	3.57	30.3
30	0.247	3.63	30.9

For a falling body $d = \frac{1}{2} a t^2$

At a fixed speed $d = v t$

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