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Calculations according to G1 - Drag Function

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Trajectory calculation:	Date: 6-Feb-2019	Time: 23:31:28
Comment	Peter Sample	
Gun / Ammunition	.303 British	
Bullet	.311, 130, Impala Bullet	
Bullet weight	8.42 g	129.94 gr.
Sectional Density SD	0.192 lb./sq.in.	
Height of sight above bore axis	5.0 cm	1.97 in.
Angle of crosswind to L.O.S.	90 deg.	
	Bullet diameter	7.90 mm 0.311 in.
	1st Coefficient of form (i)	0.622
	Crosswind velocity	4.47 m/s 10.0 Mph.
	Gyroscopic Stability (Miller)	1.41
	Twist Length (RH)	279.4 mm 11.0 in.
Single Ballistic Coefficient C1	0.308	(ICAO)
Atmosphere for table:	Std.ICAO	
Air temperature	15 °C	59 °F
Altitude ab./bel. sea level	0 m	0 ft
Barometric pressure	1013.25 hPa	29.92 in.Hg.
Relative humidity	0 %	
Air density	1.225 kg/m³	0.07647 lb./ft.³
Bullet velocity v0	827 m/s	2712.9 fps.
	Bullet energy	E0 2879 Joule 2123 ft.lbs.

Suggested Point Blank Range settings:					
Optimum zero-in range	167 m	183 yd.	Range to peak of path	103 m	113 yd.
Maximum point blank range	192 m	210 yd.	Vital height above/below LOS	3.99 cm	1.57 in.

Your settings for table:					
Zero range	400.0 m	437.4 yd.	Sight adjustment, 1 click at 100 m	4.0 cm	1.575 in.
obtained at level firing					
Angle between firing direction and line of bore : 14.702 Minutes of Angle (MOA)					

Trajectory Table according to above specified data entry

	Dist- ance	Velo- city	Flight time	Energy	Trajec- tory	Windage defl.	Total drop	Height correction for zero range	Momen- tum (m·v)	IPSC factor	Dist- ance	
	Meter	m/s	s	Joules	cm	cm	cm	clicks	MOA	Ns	Yards	
	0.0	827	0.0000	2879	-5.0	0.0	0.0	-----	-----	6.96	352.5	0.0
	50.0	779	0.0624	2552	+14.5	-0.8	1.9	-7.3	-9.98	6.56	331.9	54.7
	100.0	732	0.1282	2255	+30.0	-3.0	7.7	-7.5	-10.32	6.16	312.0	109.4
	150.0	687	0.1989	1986	+40.9	-7.4	18.2	-6.8	-9.37	5.78	292.8	164.0
	200.0	643	0.2744	1743	+46.5	-13.7	34.0	-5.8	-8.00	5.42	274.3	218.7
M	225.0	622	0.3137	1630	+47.2	-17.6	44.0	-5.2	-7.22	5.24	265.3	246.1
	250.0	601	0.3540	1523	+46.5	-21.8	55.4	-4.7	-6.40	5.06	256.4	273.4
	300.0	561	0.4397	1325	+39.6	-32.6	83.7	-3.3	-4.54	4.72	239.2	328.1
	350.0	523	0.5332	1152	+24.3	-46.5	120.4	-1.7	-2.39	4.40	223.0	382.8
X	400.0	487	0.6330	998	0.0	-63.1	166.1	0.0	0.00	4.10	207.6	437.4

M = Peak vs. L.O.S, X = Set Zero, P = Max. Point Blank Range

Table of different zero ranges

Trajectory at table atmosphere, in units of cm

	50 m	100 m	150 m	200 m	250 m	300 m	350 m	400 m	450 m	500 m
50 m Zero	X	+1.0	-2.6	-11.5	-26.0	-47.4	-77.2	-116.1	-164.4	-225.5
100 m Zero	-0.5	X	-4.1	-13.5	-28.6	-50.4	-80.8	-120.1	-169.0	-230.5
150 m Zero	+0.9	+2.8	X	-8.0	-21.6	-42.2	-71.1	-109.1	-156.5	-216.7
200 m Zero	+2.9	+6.8	+6.0	X	-11.6	-30.2	-57.1	-93.1	-138.5	-196.7
250 m Zero	+5.2	+11.4	+13.0	+9.3	X	-16.2	-40.8	-74.4	-117.6	-173.4
300 m Zero	+7.9	+16.8	+21.1	+20.1	+13.5	X	-21.9	-52.9	-93.3	-146.5
350 m Zero	+11.0	+23.1	+30.5	+32.6	+29.1	+18.8	X	-27.8	-65.1	-115.1
400 m Zero	+14.5	+30.0	+40.9	+46.5	+46.5	+39.6	+24.3	X	-33.8	-80.4
450 m Zero	+18.3	+37.5	+52.2	+61.6	+65.3	+62.2	+50.7	+30.1	X	-42.8
500 m Zero	+22.5	+46.1	+65.0	+78.7	+86.7	+87.9	+80.6	+64.3	+38.5	X

Trajectory, sighted in at Point Blank Zero range set to 167 m

+1.5	+4.0	+1.9	-5.5	-18.5	-38.4	-66.7	-104.0	-150.9	-210.4
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Multiplier for Crosswind Correction in MOA per 1 m/s Windspeed

-0.128	-0.234	-0.379	-0.529	-0.672	-0.834	-1.022	-1.214	-1.403	-1.611
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