

Gearing calculator for motorcycles

Bike 1 **Bike 2** **Bike 3** **Bike 4**
R6 Track (48) **R6 Track (49)** **01 F4i Track** **2002 RC51**

Sprockets

Countershaft	15	15	15	15
Rear Sprocket	48	49	48	41
Max RPM	15500	15500	14500	10000

Transmission

Primary Reduction	1.955	1.955	2.000	1.700
1st	2.846	2.846	2.930	2.641
2nd	1.947	1.947	2.102	1.812
3rd	1.556	1.556	1.592	1.428
4th	1.333	1.333	1.377	1.240
5th	1.190	1.190	1.190	1.080
6th	1.083	1.083	1.075	0.962
Final Reduction	3.200	3.267	3.200	2.733

Rear Tire

Tire Width	180	180	180	190
Aspect Ratio	55	55	55	50
Wheel Radius	17	17	17	17
Tire Radius (mm)	314.9	314.9	314.9	310.9
Top Speed (MPH)	168.8	165.3	155.5	163.0

Ratio Calculations

Overall Ratio in 1st	17.804576	18.17550467	18.752	12.27184667
Overall Ratio in 2nd	12.180432	12.434191	13.4528	8.41976
Overall Ratio in 3rd	9.734336	9.937134667	10.1888	6.63544
Overall Ratio in 4th	8.339248	8.512982333	8.8128	5.761866667
Overall Ratio on 5th	7.44464	7.599736667	7.616	5.0184
Overall Ratio in 6th	6.775248	6.916399	6.88	4.470093333

Speed Calculations

Top Speed in 1st	64.2	62.9	57.1	59.4
Top Speed in 2nd	93.9	92.0	79.5	86.5
Top Speed in 3rd	117.5	115.1	105.0	109.8
Top Speed in 4th	137.1	134.3	121.4	126.4
Top Speed on 5th	153.6	150.5	140.5	145.2
Top Speed in 6th	168.8	165.3	155.5	163.0

Engine Speed (RPM)

3500	22.3	22.3	26.5	55.4
4500	29.4	29.4	28.5	52.7
5500	33.4	33.4	29.1	61.7
6500	35.0	35.0	35.0	64.9

Engine Torque (ft*lb)

3500	22.3	22.3	26.5	55.4
4500	29.4	29.4	28.5	52.7
5500	33.4	33.4	29.1	61.7
6500	35.0	35.0	35.0	64.9



