

**Airnimal Black Rhino : Rohloff Speedhub : Schwalbe Marathon
Distance Travelled Per Crank Revolution**

Rohloff Gear Number		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Distance Travelled (metres)		1.4	1.6	1.8	2.1	2.4	2.7	3.1	3.5	3.9	4.5	5.1	5.8	6.6	7.5
Front Chainring (teeth)	42														
Rear Sprocket (teeth)	13														
Hub Gear Ratio		0.279	0.316	0.360	0.409	0.464	0.528	0.600	0.682	0.774	0.881	1.000	1.135	1.292	1.467
Tyre Circumference (metres)	1.576	In gear 11 the rear wheel and rear sprocket turn at the same speed (as if locked together); in higher gears (12 to 14) the rear wheel turns faster than the rear sprocket; in the lowest gears the rear sprocket will have to turn several times to turn the wheels just once. Measure circumference accurately by rolling bike across a smooth surface (a tiled floor is ideal). Guesstimate circumference by multiplying the tyre's nominal diameter by π (500mm x π = 1571mm).													
Distance Travelled Formula	chainring / sprocket x hub gear ratio x tyre circumference = distance travelled per crank revolution														
Example (gear 8)	$42 / 13 \times 0.682 \times 1.576 = 3.4725$ (our numbers are rounded to 1 decimal point)														
Hint	To understand gear formulas, follow the order in which power is transferred: cranks-chainring-rear sprocket-hub gears-tyre.														