

Rollin' Along Solution B

Make a table. Divide 112 by 2 to get a starting point. If there were no cars, there could be 56 motorcycles but the problem says that there are motorcycles and cars. So, subtract two motorcycles since cars have 4 wheels.

Number of Cars	Number of Car Wheels	Number of Motorcycles	Number of Motorcycle Wheels	Total Number of Wheels
1	4	54	108	112
2	8	52	104	112
3	12	50	100	112
4	16	48	96	112
5	20	46	92	112
6	24	44	88	112
7	28	42	84	112
8	32	40	80	112
9	36	38	76	112
10	40	36	72	112
11	44	34	68	112
12	48	32	64	112
13	52	30	60	112
14	56	28	56	112
15	60	26	52	112
16	64	24	48	112
17	68	22	44	112
18	72	20	40	112
19	76	18	36	112
20	80	16	32	112
21	84	14	28	112
22	88	12	24	112
23	92	10	20	112
24	96	8	16	112
25	100	6	12	112
26	104	4	8	112
27	108	2	4	112

Observations:

- Each time the number of cars increases by 1, the number of motorcycles decreases by 2. It takes 2 motorcycles to produce the same number of wheels as 1 car.
- The number of motorcycles is always an even number.
- The number of motorcycle wheels is a multiple of 2.
- The number of car wheels is a multiple of 4.