Gear Table.....

Bicycle gears measured in inches date all the way back to the Ordinary or Penny Farthing bicycle. The large drive wheel was usually around 50 to 60 inches in diameter.

When the first chain-driven Safety bicycles were built the manufacturers advertised them as having, for example, a 60 inch gear. In other words, the gearing was the equivalent of a 60-inch diameter drive wheel.

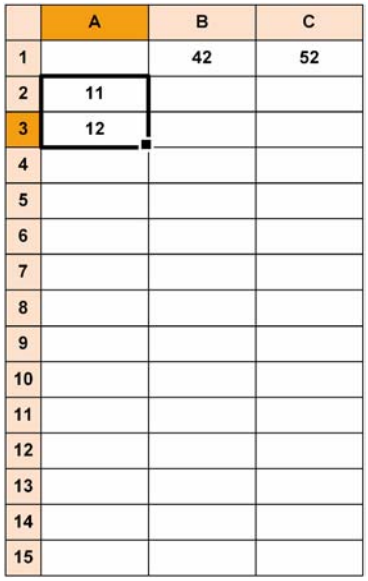
The formula for calculating a gear is simple; it is the diameter of the rear wheel, divided by the number of teeth on the rear sprocket, times the number of teeth on the chainwheel.

A bicycle with a 27 inch wheel, an 18 tooth rear sprocket, and a 48 tooth chainwheel, would have a 27, divide by 18, times 48, equals a 72 inch gear. The equivalent of a 72 inch diameter drive wheel on an Ordinary.

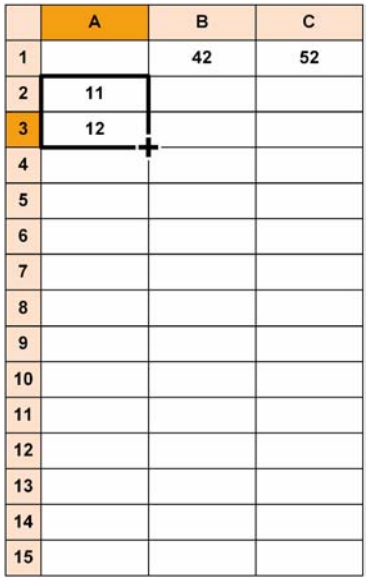
You can make this handy gear table on your PC using Microsoft Excel.

	A	B	C
1		42	52
2	11		
3	12		
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

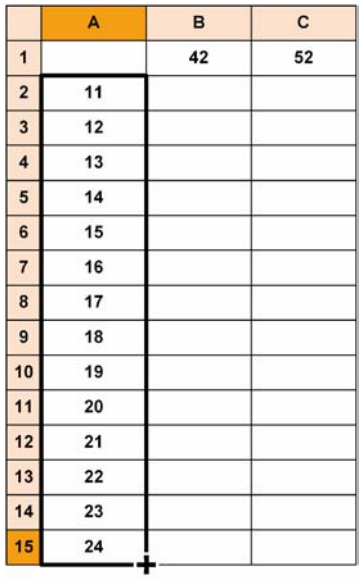
Open a new page in Excel and in the top row, column B and C type in your chainwheel sizes. If you have a triple, use column D also. In A2, type 11 and in A3, type 12. These are the number of teeth on your rear sprocket.



Click and drag the curser over A2 and A3 and a box will appear around it with a small square in the bottom right.



Place your curser over the little square and it will turn into a plus symbol (+)



Click and hold the + and drag the box to extend it down the column and it will automatically place numbers in sequence. Go as far as you wish to the largest sprocket size you use.

You can delete any sprocket sizes you don't have. Right click on the extreme left of the row to highlight it, and click delete.

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	A	B	C
1		42	52
2	11	=27/A2*42	
3	12		
4	13		
5	14		
6	15		
7	16		
8	17		
9	18		
10	19		
11	20		
12	21		
13	22		
14	23		
15	24		

In B2 type in the formula **=27/A2*42** You must start with the equals (=) symbol. (Change 42 to your chainwheel size if you have something different.)

	A	B	C
1		42	52
2	11	103.09	
3	12	94.50	
4	13	87.23	
5	14	81.00	
6	15	75.60	
7	16	70.88	
8	17	66.71	
9	18	63.00	
10	19	59.68	
11	20	56.70	
12	21	54.00	
13	22	51.55	
14	23	49.30	
15	24	47.25	

Click on the little square in the bottom right corner of the cell and drag it down the column. It will automatically repeat the formula for each sprocket size. If you are showing more than 2 decimal places, highlight the column by clicking on the top. Right click, go Format cells > Number, and put 2 in the decimal place box. Click OK.

	A	B	C
1		42	52
2	11	103.09	=27/A2*52
3	12	94.50	
4	13	87.23	
5	14	81.00	
6	15	75.60	
7	16	70.88	
8	17	66.71	
9	18	63.00	
10	19	59.68	
11	20	56.70	
12	21	54.00	
13	22	51.55	
14	23	49.30	
15	24	47.25	

In C2 type in the formula **=27/A2*52** (Change 52 if yours if different.)

	A	B	C
1		42	52
2	11	103.09	127.64
3	12	94.50	117.00
4	13	87.23	108.00
5	14	81.00	100.29
6	15	75.60	93.60
7	16	70.88	87.75
8	17	66.71	82.59
9	18	63.00	78.00
10	19	59.68	73.89
11	20	56.70	70.20
12	21	54.00	66.86
13	22	51.55	63.82
14	23	49.30	61.04
15	24	47.25	58.50

Click on the cell and drag it down the column as before. If it is not working, make sure you have the formula exactly as shown here. Alternatively, if you are starting with a different cell, A3 for example, your formula must reflect this.

Gear tables are useful especially when you have multiple gears in comparing different rear sprocket and chainwheel combinations.

If you wish you can measure your exact wheel size and substitute this for the standard 27 inch. But remember gear tables are mostly for comparing one chainwheel and sprocket combination with another so for this purpose 27 is close enough.