DATA

	A	B
1	**Term**	**Ratio**
2	0	
3	1	
4	1	1
5	2	2
6	3	1.5
7	5	1.6666667
8	8	1.6
9	13	1.625
10	21	1.6153846
11	34	1.6190476
12	55	1.6176471
13	89	1.6181818
14	144	1.6179775
15	233	1.6180556
16	377	1.6180258
17	610	1.6180371
18	987	1.6180328
19	1597	1.6180344
20	2584	1.6180338
21	4181	1.6180341
22		

EXAMPLE 4 Using the Golden Ratio

The spreadsheet shows that when you find the ratio of any two successive terms in the Fibonacci sequence (divide the larger by the smaller), you approach the limit of 1.6180339887. . .. This is called the *golden ratio*.

In art, a rectangle whose side lengths are in this ratio is considered aesthetically pleasing. Identify some uses of this "golden rectangle" in art and architecture.

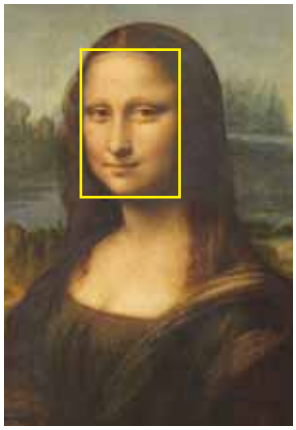
Golden Rectangle

SOLUTION

The dimensions of the front of the Parthenon in Athens are roughly that of a golden rectangle.

Switch plate

Mona Lisa's face



Study Tip

The golden ratio can be written exactly using a square root.

$$\frac{1+\sqrt{5}}{2} = 1.6180339887\ldots$$

Checkpoint

Help at Math.andYOU.com

Use the Internet to find other examples of the use of the golden ratio in art or architecture.