> *We must say that there are as many squares as there are numbers.*
>
> Galileo Galilei

February 2009

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

April 2009

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

March 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8 Daylight Savings Time Begins	9 Purim (Begins at Sundown) Square Root Day	10	11	12	13	14 Pi Day Albert Einstein's Birthday SAT Test Date
15	16	17 St. Patrick's Day	18	19 NSTA Conference New Orleans, LA *www.nsta.org*	20 NSTA Conference	21 NSTA Conference
22 NSTA Conference New Orleans, LA *www.nsta.org*	23	24	25	26	27	28
29	30	31 Registration Deadline for May SAT				

Math Question — A geometric series is defined as the sum from n = 1 to infinity of the terms defined by x to the nth power. For what range of x does the geometric series converge?

A: Between -1 and 1, or |x| < 1
[Solution: if x is greater than or equal to 1, terms do not converge]

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In his book, the *Two New Sciences*, Galileo noted contradictory statements about positive whole numbers. Some numbers are perfect squares while others are not. If you counted to infinity (1, 2, 3, 4, etc.), you could write the square of each number next to it (1 next to 1, 4 next to 2, 9 next to 3, etc.). The paradox occurs because you would think the squares would become fewer and fewer when spread out over the countable numbers, but they never run out. There will always be a number to pair with another in a one-to-one correlation of infinite sets; thus, there cannot be more of one than of the other.

Later, the German mathematician Georg Cantor argued that the above theory was correct when applied to whole and rational numbers, but that some infinite sets are larger than others.

Today, many math textbooks define an infinite set as one that can be placed in a 1-1 correspondence with a proper subset of itself.

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