

April Math People



Pierre de Fermat August 1601 – January 12, 1665. A French lawyer and amateur mathematician, Fermat corresponded with Descartes, Wallis and Pascal. Fermat's mathematical work was in Number Theory and the precursors of Calculus. He left a puzzling note in the margin of his copy of Diophantus' *Arithmetica*, that $x^n + y^n = z^n$ has no positive integer solutions for $n > 2$, noting that

I have discovered a truly remarkable proof which this margin is too small to contain.

Fermat's later correspondence with Pascal led to the beginnings of Mathematical Probability.

en.wikipedia.org/wiki/Pierre_de_Fermat

Sophie Germain April 1, 1776 – June 27, 1831. Sophie taught herself math using the books in her father's library. Her parents discouraged her by extreme measures, but finally relented in the face of her determination. At age 18 she found that women were not allowed to enroll in the Ecole Polytechnique (Paris), so she submitted work to Lagrange under a pseudonym. Lagrange finally learned of her ruse and became her mentor. Sophie later corresponded with Carl Friedrich Gauss, again under her pseudonym *M. LeBlanc*. She accomplished significant work in Number Theory, proving many cases of Fermat's Last Theorem. She died before Gauss was able to convince the University of Gottingen to give her an honorary degree.

www.agnesscott.edu/lriddle/women/germain.htm

Andrew Wiles April 11, 1953 –

Andrew learned about Fermat's Last Theorem from a book at his local library when he was 10 years old. He returned to the topic as a math professor at Princeton University, and devoted 7 years to proving the Shimura-Taniyama conjecture, "that every elliptic curve defined over the rational numbers is modular." A consequence would be a proof of Fermat's Last Theorem. Andrew Wiles was ultimately successful in 1994, and the history of the problem is nicely documented in *The Proof*.

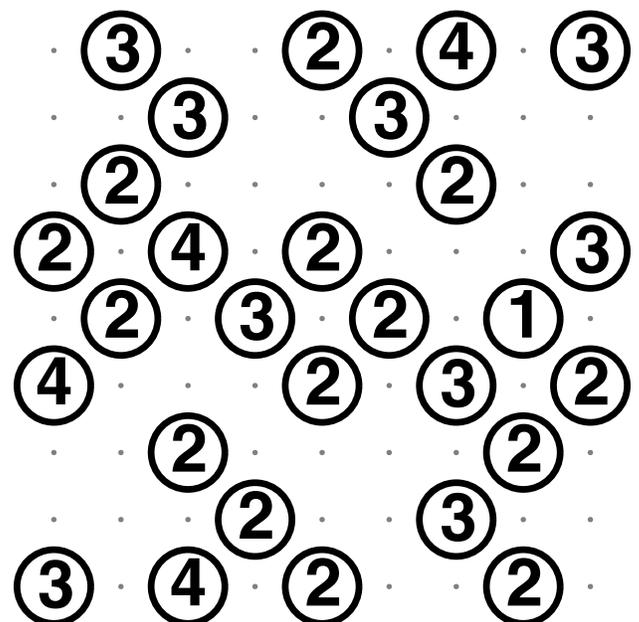
www-history.mcs.st-andrews.ac.uk/Biographies/Wiles.html

Puzzles

KenKen: Place the numbers 1, 2, 3, 4 and 5 in the grid below, so that each appears once in each row and column. The numbers in each cage, when combined with the operation given, must result in the target number shown. lavoze.bard.edu

12+		6+	10×	
	1-			1-
3-		24×		
	100×			2-
6×				

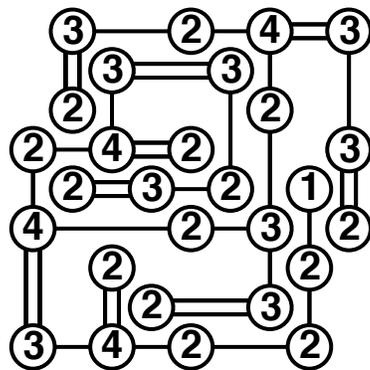
Bridges: Connect islands with single and double bridges. All bridges must be vertical or horizontal, and the numbers indicate exactly how many bridges leave the island. Bridges may not cross, and the result is *simply* connected. krazydad.com



Answers (Not the same as solutions!)

13, 225, yes. 

¹²⁺ 3	4	⁶⁺ 1	^{10×} 5	2
5	¹⁻ 1	2	3	¹⁻ 4
³⁻ 4	2	^{24×} 3	1	5
1	^{100×} 5	4	2	²⁻ 3
^{6×} 2	3	5	4	1



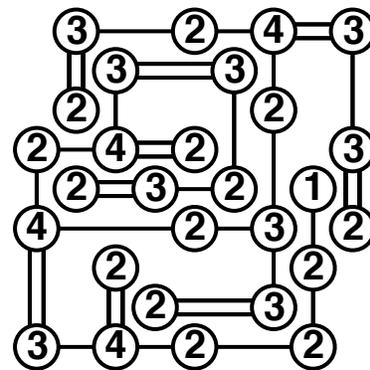
Upcoming Events

Kingston: Saturday, April 13th (Tesselations)
 Tivoli: Friday, May 3rd
 Kingston: Saturday, May 11th (Chalk Walk)
 Info: bardmathcircle.blogspot.com.

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