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NATIONAL MUSEUM OF MATHEMATICS (MoMATH) OPENS NEW MATH/ART EXHIBIT Reflections: Geometries of the Reflected World Opens March 1, 2018

Visitors Can Explore the Intriguing Geometries of the Reflected World Through More than 20 Interactive Experiences and Objects

New York, NY (February 22, 2018): On Thursday, March 1, the highly popular <u>National Museum</u> of <u>Mathematics</u> (MoMath), which has brought the fun, beauty, and intellectual excitement of math to more than 1.5 million people of all ages in New York and around the world, will debut a Math/Art exhibit called <u>*Reflections: Geometries of the Reflected World*</u>. *Reflections* explores the intriguing geometries of the reflected world through more than 20 interactive experiences and objects revealing profound mathematical truths about the nature of space.

Featured in the Museum's *Composite Gallery, Reflections: Geometries of the Reflected World* allows visitors to explore principles of symmetry, from the bilateral proportion of the human body to the entrancing balances of written letters and words, while discovering a unique connection between art and math.

Through a series of more than 20 interactive experiences, *Reflections* reveals the nature of the non-reflected space in which we live. Designed for visitors five and older, the exhibit presents mathematical tools to answer questions such as why images are flipped when seen in a mirror. Also explored is the principle of when light hits a surface, the angle it makes coming in is the same as the angle it makes going out, (i.e., the angle of incidence equals the angle of reflection.)

Visitors will have the opportunity to:

- Examine the fascinating properties of cylindrical mirrors, how they compress and expand images, and the clever way that artists can use them to create and resolve mathematically-distorted drawings.
- See a fractal (a pattern that repeats itself endlessly at a smaller and smaller scale) emerge from a simple array of four reflective chrome spheres, and puzzle through the strange and beautiful virtual worlds created by repeated internal reflections.
- Experience the geometry of parabolic reflectors by feeling the surprisingly strength of the heat reflected from a far-off lamp.
- Use specially-made kaleidoscopes to visualize giant Archimedean solids (geometric objects).
- Create patterns of light by manipulating flexible mirrors.
- Understand the mathematical connection between the reflective eyes of nocturnal animals and the technology that gives us the precise measurements of the distance from Earth to the Moon.

"Reflections: Geometries of the Reflected World brings to life MoMath's mission of making math fun and accessible for people of all ages," said Cindy Lawrence, Executive Director of MoMath. "Reflections have fascinated humanity since time immemorial. The nature of the image we see in a mirror or in a still body of water can seem paradoxical and mysterious. Our newest exhibit, *Reflections: Geometries of the Reflected World*, combines math and art in 20 interactive experiences that provide tools and answers to the often-baffling interactions we have with light and mirrors."

About the National Museum of Mathematics

The National Museum of Mathematics (MoMath) strives to enhance public understanding and perception of mathematics in daily life. Currently celebrating its fifth anniversary, MoMath has reached more than 1.5 million New Yorkers and visitors from around the world.

The only math museum in North America, MoMath fills a critical demand around the country and worldwide for hands-on math programming, offering a space where the math-challenged, as well as math enthusiasts of all backgrounds and levels of understanding, can enjoy the infinite and beautiful world of mathematics through more than 37 unique, state-of-the-art, interactive exhibits.

In addition to MoMath's home in New York City, Museum exhibitions and content are currently featured in Singapore, Brazil, Germany, Russia, Spain, Sweden and the UK.

MoMath received the 2016 Communications Award for Public Outreach from the Joint Policy Board for Mathematics. The Museum was awarded the bronze 2013 MUSE Award for Education and Outreach by the American Alliance of Museums. MoMath has been recognized as the Most Fascinating Museum in New York State by the TripAdvisor vacation site, and hailed as "Best Museum for Kids" by *New York Magazine*.

MoMath, located at 11 East 26th Street on the north side of popular Madison Square Park in Manhattan, is open seven days a week, 10 a.m.- 5 p.m. For more information, visit <u>momath.org.</u>

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