



Astronomy

Astronomy—the scientific study of the skies—was an area in which Islamic scientists made great achievements. For centuries, astronomers relied on the belief, put forward by the Alexandrian astronomer Ptolemy, that the earth was the center of the universe and that the sun, stars, and other planets rotated around the earth. Muslim astronomers studied Ptolemy’s tables, made their own observations, and gradually found and corrected many mistakes Ptolemy had made. An instrument used by astronomers that helped them make new discoveries was the astrolabe, a device adapted from the Greeks. This was a small, flat, brass disc marked off in degrees. By lining up the pointer with the sun, the user could measure latitude, tell the time of day, and determine the position or movement of the stars and planets. Some astronomers, who already knew the earth was a sphere (globe), began to believe the earth rotated on its own axis and that the sun was the center of the universe. These same ideas were eventually discovered in Western Europe centuries later.

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If $\gamma = 6$
Solve for x :
 $x + 2\gamma = 20$

Algebra

Muslim scholars of the Abbasid period were very interested in furthering the developments of the ancient Greeks in mathematics. They spent hours trying to stump one another with difficult mathematical puzzles. For fun, they also made “magic boxes” that were grids containing numbers that added up to the same sum horizontally, vertically, and diagonally. The science of algebra as we know it today was introduced by Muslims. The most famous math scholar, Al Khwarazmi (al KWAH riHz mee), introduced algebra to civilization. Algebra comes from the word “al jabr,” which means “the bringing together of separate parts.” In algebra, a mathematician substitutes symbols such as x , y , or z for numbers in order to solve mathematical problems.

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