The First Work on Mathematics Published in the New World

The first work on mathematics published in the New World appeared in 1556. Called the *Sumario Compendioso* and printed in Spanish, it was published in the City of Mexico by a companion of Cortes named Juan Diez. This book predates the earliest known English works by over 150 years.

Fourteen years after the capture of the city of Tenochtitlan, then called Mexico City, a man named Don Antonio de Mendoza took over as viceroy of New Spain. Mendoza seems to have cared sincerely about the condition of the native people of New Spain. During his fifteen-year tenure he established schools, encouraged the development of the arts, and set up a mint. Naturally, a large part of improving the condition of the natives included spreading the word of the Gospel, and to this end he set up a branch of Juan Cromberger’s printing press in the colony. Before long, the press turned to more worldly uses. The *Sumario Compendioso* was published not with the original intent of educating anyone, but rather of providing tables to aid in the purchase and sale of gold and silver to and from Spain—keeping the merchants involved free from the need to actually compute anything. It seems, however, that there was a large demand from accountants for material on arithmetic and algebra. As a result, the *Sumario* contains eighteen pages on arithmetic and six on algebra.

Almost all of the problems included were applied mathematics—though occasionally this seems somewhat forced. (One problem listed under Algebra states, “The passenger on asking … how much [boat fare] would be, the master replies ‘It will be the number of pesos which, multiplied by itself and added to the number, will give 1260.’ Required to know how much the master asked.”) No symbolic notation is used in the solutions. Instead, the terms *cosa* and *zenso* are used to denote $x$ and $x^2$, respectively. The solutions to some of the problems also seem rather overcomplicated—that is, instead of setting up the equation $x^2 + x = 1260$ for the above problem, the solution says “Let the cost be a *cosa* of pesos. Then half of a *cosa* squared makes $\frac{1}{4}$ of a *zenso*, and this added to 1260 makes 1260 and a quarter, the root of which less $\frac{1}{2}$ of a *cosa* is the number required. Reduce 1260 and $\frac{1}{4}$ to fourths; this is equal to $5041/4$, the root of which is 71 halves; subtract from it half of a *cosa* and there remains 70 halves, which is equal to 35 pesos, and this is what was asked for the passage.” Each problem then contains a ‘proof’ section, which plugs the answer just obtained back into the original problem.

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