

CATHOLIC CURRICULAR STANDARDS AND DISPOSITIONS IN MATHEMATICS 7-12¹²

The school considers human knowledge as a truth to be discovered. In the measure in which subjects are taught by someone who knowingly and without restraint seeks the truth, they are to that extent Christian. Discovery and awareness of truth leads man to the discovery of Truth itself. A teacher who is full of Christian wisdom, well prepared in his own subject, does more than convey the sense of what he is teaching to his pupils. Over and above what he says, he guides his pupils beyond his mere words to the heart of total Truth.

The Catholic school, 1977, #41

<i>General Standards</i>			
CS	M.712	GS1	Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning in the pursuit of transcendent truths.
CS	M.712	GS2	Develop lines of inquiry to understand why things are true and why they are false.
CS	M.712	GS3	Have faith in the glory and dignity of human reason as both a gift from God and a reflection of Him in whose image and likeness we are made.
CS	M.712	GS4	Explain how mathematics in its reflection of the good, true, and beautiful reveals qualities of being and the presence of God.
<i>Intellectual Standards</i>			
CS	M.712	IS1	Explain the nature of rational discourse and argument and the desirability of precision and deductive certainty which mathematics makes possible and is not possible to the same degree in other disciplines.
CS	M.712	IS2	Demonstrate how sound logical arguments and other processes of mathematics are foundational to its discipline.
CS	M.712	IS3	Recognize how mathematical arguments and processes can be extrapolated to other areas of study, including theology and philosophy.
CS	M.712	IS4	Explain how it is possible to mentally abstract and construct mathematical objects from direct observations of reality and how one's perception of that reality is important to what one is doing (see Appendix F).
CS	M.712	IS5	Recognize personal bias in inquiry and articulate why inquiry should be undertaken in a fair and independent manner.
CS	M.712	IS6	Evaluate the ongoing nature of mathematical inquiry, its inexhaustibility, and its openness to the infinite.
CS	M.712	IS7	Explain man's limitations of understanding and uncovering all mathematical knowledge.
CS	M.712	IS8	Explain how fundamental questions of values, common sense, and religious and human truths and experiences are beyond the scope of mathematical inquiry and its syllogisms.
<i>Dispositional Standards</i>			
CS	M.712	DS1	Display a sense of wonder about mathematical relationships, especially mathematical certitude which is independent of human opinion.
CS	M.712	DS2	Share with others the beauty, harmony, proportion, radiance, and wholeness present in mathematics.

¹² See Appendix F for Mathematics resources.

CS	M.712	DS3	Advocate for the pursuit of understanding for its own sake and the intrinsic value or discovery of the true and the beautiful often at the requirement of great sacrifice, discipline, and effort.
CS	M.712	DS4	Exhibit appreciation for the ongoing nature of mathematical inquiry.
CS	M.712	DS5	Exhibit habits of thinking quantitatively and in an orderly manner, especially through immersion in mathematical observations found within creation.
CS	M.712	DS6	Propose how mathematical objects or proofs (such as the golden mean, the Fibonacci numbers, the musical scale, and geometric proofs) suggest divine origin.
CS	M.712	DS7	Exhibit appreciation for the process of discovering meanings and truths existing within the solution of the problem and not just arriving at an answer.
CS	M.712	DS8	Exhibit humility at knowing that as a human being man can only grasp a portion of the truths of the universe.
CS	M.712	DS9	Advance an understanding of the ability of the human intellect to know and the desire of the will to want to know more.