

Table S1. Tools, domains, and criteria used to define the group with MD in included studies.

Math Achievement Test	Domains	Criteria for MD	Study
AC-MT ⁱ 11-14	Written calculation (+; -; x; :); number knowledge (number magnitude; numerical syntax comprehension)	< 25°	Passolunghi., 2011
		< 10°	Mammarella et al., 2018 ^b
AC-FL ⁱⁱ	Math Fluency (+; -; x)	<10°	Mammarella et al., 2018 ^b
DEMAT ⁱⁱⁱ	arithmetic, geometry, numerical sizes	< 25°	Lambert & Spinath, 2018
IDS ^{iv}	Arithmetical skills (counting; ordinal number; magnitude; invariance; knowledge of Arabic numbers; one step arithmetic word problem)	< 15°	Reimman et al., 2013
KTR-R ^v	Mental arithmetic + number knowledge	< 10°	De Weerdts et al., 2012a ^b
		< 10°	De Weerdts et al., 2012b ^b
MaLT ^{vi}	All area of math curriculum	< 16°	Szucs et al., 2013 ^a
TEMA-2 ^{vii}	Quantities; Counting; comparison; informal arithmetic	< 10° in at least three assessment	Mazzocco & Kover, 2007
		< 25° (or < 10°) in at least two assessment	Murphy et al., 2007
		< 25° at both preschool years	Chu et al., 2019 ^a
TDE ^{viii}	Arithmetic subtest: simple word problems and computational skills (+; -; x; :)	-1 sd	Costa et al., 2011
		< 25°	Moura et al., 2013
TTR ^{ix}	Arithmetic number facts problems (+; -; x; : and mixed)	< 10°	De Weerdts et al., 2013a ^b ;
		< 10°	De Weerdts et al., 2013b ^b ;
		1 year delayed	Attout & Maierius, 2015 ^c
		- 1 sd	Donker et al., 2016 ^a
		-1 sd	Slot et al., 2016 ^a
WIAT ^x	Mathematics reasoning- basic arithmetic skills (counting; subtraction; reading numbers; time telling)	< 30°	Geary et al., 1999
		< 30°	Geary et al., 2004
		< 25° on 1 st grade	Chu et al., 2019 ^a
		< 35° in all assessment	Geary et al., 2000

		< 15° in all assessment	Geary et al., 2007
		< 11° in all assessment	Geary et al., 2008
		< 11° in all assessment	Cowan & Powell, 2014 (+ fluency task)
	Numerical Operations Subtest (counting; reading numbers; written calculation for +; -; x; :)	< 16°	Szucs et al., 2013 ^a
		< 25°	McDonald & Berg, 2018
WJ-III ^{xi}	Calculation subtest	< 15°	Fuchs et al., 2008 (+ not validated tests)
		< 25°	Keeler & Swanson
		< 11° in half assessment	Mazzocco & Grimm, 2013
WRAT ^{xii}	Computational skills (+; -; x; :)	< 25°	Keeler & Swanson, 2001
		< 25°	Peng et al., 2012 ^a
		<30° in both years	Passolunghi & Siegel, 2004 ^a
	Identification of numbers; counting; number comparison; computational skills (+; -; x; :) Identification of numbers; counting; number comparison; computational skills (+; -; x; :)	< 16°	Raghubar et al., 2009
		<30°	Cirino et al., 2007
		<25°	Cirino et al., 2015
		-1 or 1.5 sd - 2 sd	Webster, 1980
ZAREKI-R ^{xiii}	Number processing (counting; transcoding; comparison); and calculation (mental; problem solving)	Raw score < 80	Kuhn et al., 2016
		- 1.5 sd	Lafay et al., 2017
Local math standardized test	Standardized Math Test (Amoretti et al., 1994)	< 25°	Passolunghi & Mammarella, 2012
		< 30° in all assessment	Passolunghi & Siegel, 2004 ^a
	Standardized math test (Dong, 2011) number; algebra; space and geometry; statistics and probability (+ < 20° on the last three academic exams)	< 20°	Cai et al., 2013
	Standardized pedagogic task (Simonart,1998)- Computational skills (+; - ; x; :)	2 years of delay	Censabella & Noel, 2007 (study #1)

	Cito Math test (Math problem solving; Janssen et al., 2010)	< 15°	Kroesbergen & Van Dijk, 2015
		< 25°	Donker et al., 2016 ^a
		< 25°	Slot et al., 2016 ^a
	Swedish National Agency for Education (arithmetic; measurement; geometry; fractions; algebra; probability and statics)	Grade E	Träff et al., 2020
	LAMK ^{xiv}	< 25°	Wong & Chan, 2019
		< 25° in both assessment	Chan & Wong, 2019
Math Problem Solving	Adapted from <i>Arithmetical Reasoning</i> subtest (WISC-IV)	< 15°	Peng et al., 2012 ^a
Composite score	Tedi-Math ^{xv} (writing numbers and comparison) + computational skills (<i>ad hoc</i>)	< 15°	Rousselle & Noël, 2007
	PIAT ^{xvi} + WRAT-R	-1.25 sd	Willcutt et al., 2013
	Hong Kong Attainment test on Mathematics (arithmetic; measure; shape and space; data handling) + computational skills (+; -; ×); Number sense; Number facts; place value	< 25° in 2 nd grade < 20° in 3 rd and 4 th grades	Chan & Ho, 2010
Growth curve		WIAT	Geary et al., 2012a; Geary et al., 2012b
		BAT ^{xvii}	Zhang et al., 2020

^aMD group defined by scores under cut-off on both test

^bMD group defined by scores under cut-off on at least one test

^cMD group defined by both one-year delay at TTR and scores below 2 sd on at least two subtests of standardized arithmetical tests (ZAKERI-R; Tedi-Math; Numerical)

ⁱAC-MT= Assessment of Arithmetic Calculation (Test di valutazione delle Abilità di Calcolo- gruppo MT). *Cornoldi et al., 2002*

ⁱⁱ AC-FL. Nuove prove di fluenza matematica (Mathematics Fluency). *Caviola et al., 2016*

ⁱⁱⁱ DEMAT= Deutscher Mathematiktest [German Test for mathematical achievement]. *Krajewski et al., 2004*

^{iv} IDS= Intelligence and Development Scales. *Grob et al., 2009*

^v KRT-R= Kortrijkse Rekenentest Revisie (Kortrijk Arithmetic test Revision). *Baudonck et al., 2006*

^{vi} MaLT= Mathematics Assessment for Learning and Teaching test. *Williams, 2005*

^{vii} TEMA= Test of Early Mathematics Ability.

^{viii} TDE= Teste de Desempenho Escolar. *Stein, 1994*

^{ix} TTR= Tempo Test Rekenen (Tempo Test Arithmetic). *De Vos, 1992*

^x WIAT= Weschler Individual Achievement Test (Mathematics Reasoning subtest). *Weschler, 1992*

^{xi} WJ -III= Woodcock-Johnson Test of Achievement

^{xii} WRAT= Wide Range Achievement Test

^{xiii} ZAREKI-R= Neuropsychologische Testbatterie für Zahlenverarbeitung und Rechnen bei Kindern – Revidierte Fassung. *Von Aster et al., 2006*

^{xiv} LAMK: Learning and achievement Mathematical Kit. *Hong Kong Education Bureau, 2015*

^{xv} Tedi Math= Test Diagnostique des Compétences de Base en Mathématiques. *Van Nieuwenhoven et al., 2001*

^{xvi} PIAT= Peabody Individual Achievement Test.

^{xvii} BAT= Basic Arithmetic Test. *Räsänen & Aunola, 2007*