

Table 403. Average 8th-grade mathematics scores, by content areas, average time spent studying out of school, and country: 1999

Country	Average achievement scale score							Distribution of daily out-of-school study time in mathematics, with mean mathematics scores				
	Mathematics overall	Fractions and number sense	Geometry	Algebra	Data representation, analysis and probability	Measurement	No time		Less than 1 hour		One hour or more	
							Percent	Mean score	Percent	Mean score	Percent	Mean score
1	2	3	4	5	6	7	8	9	10	11	12	13
International average	487 (0.7)	487 (0.7)	487 (0.7)	487 (0.7)	487 (0.7)	487 (0.7)	10 (0.1)	455 (1.7)	50 (0.2)	495 (0.8)	40 (0.2)	486 (0.9)
Australia	525 (4.8)	519 (4.3)	497 (5.7)	520 (5.1)	522 (6.3)	529 (4.9)	15 (1.0)	493 (6.3)	63 (1.1)	537 (5.0)	22 (1.0)	515 (6.3)
Belgium (Flemish)	558 (3.3)	557 (3.1)	535 (4.1)	540 (4.6)	544 (3.8)	549 (4.0)	3 (0.8)	476 (21.8)	50 (1.0)	573 (3.8)	47 (1.2)	550 (3.1)
Bulgaria	511 (5.8)	503 (6.6)	524 (5.9)	512 (5.1)	493 (6.1)	497 (6.6)	12 (1.2)	494 (9.5)	45 (1.3)	516 (5.5)	43 (1.7)	521 (7.9)
Canada	531 (2.5)	533 (2.5)	507 (4.7)	525 (2.4)	521 (4.5)	521 (2.4)	11 (0.8)	527 (5.2)	61 (1.0)	542 (2.8)	28 (1.0)	510 (3.3)
Chile	392 (4.4)	403 (4.9)	412 (5.4)	399 (4.3)	429 (3.8)	412 (4.9)	17 (0.8)	384 (5.9)	54 (0.7)	400 (4.7)	29 (1.0)	394 (7.1)
Chinese Taipei	585 (4.0)	576 (4.2)	557 (5.8)	568 (4.4)	559 (5.1)	566 (3.4)	31 (1.3)	529 (4.8)	44 (0.8)	604 (3.5)	25 (1.0)	627 (4.7)
Cyprus	476 (1.8)	481 (3.0)	484 (4.6)	479 (1.6)	472 (4.6)	471 (4.0)	9 (0.6)	496 (2.7)	51 (1.1)	496 (2.7)	40 (1.1)	469 (2.4)
Czech Republic	520 (4.2)	507 (4.8)	513 (5.5)	514 (4.0)	513 (5.9)	535 (5.0)	12 (1.0)	525 (9.2)	68 (1.3)	528 (4.6)	20 (1.1)	483 (5.2)
England	496 (4.1)	497 (3.8)	471 (4.2)	498 (4.9)	506 (8.0)	507 (3.8)	— (—)	— (—)	— (—)	— (—)	— (—)	— (—)
Finland	520 (2.7)	531 (3.8)	494 (6.0)	498 (3.1)	525 (3.8)	521 (4.7)	7 (0.6)	506 (8.1)	85 (0.8)	525 (2.5)	8 (0.7)	486 (6.8)
Hong Kong, SAR ¹	582 (4.3)	579 (4.5)	556 (4.9)	569 (4.5)	547 (5.4)	567 (5.8)	25 (1.2)	552 (6.1)	51 (0.9)	591 (3.9)	24 (1.1)	600 (4.8)
Hungary	532 (3.7)	526 (4.2)	489 (4.3)	536 (4.1)	520 (5.9)	538 (3.5)	4 (0.4)	497 (9.9)	71 (1.0)	540 (3.6)	25 (1.1)	514 (5.0)
Indonesia	403 (4.9)	406 (4.1)	441 (5.1)	424 (5.7)	423 (4.4)	395 (5.1)	10 (0.8)	396 (8.4)	38 (1.0)	405 (5.6)	51 (1.4)	406 (5.4)
Iran, Islamic Republic	422 (3.4)	437 (4.5)	442 (2.9)	434 (4.9)	430 (6.0)	401 (4.7)	3 (0.3)	375 (14.1)	22 (0.8)	425 (3.7)	75 (1.0)	427 (3.7)
Israel ²	466 (3.9)	472 (4.4)	467 (5.4)	479 (4.5)	468 (5.1)	457 (5.1)	8 (0.6)	436 (11.3)	48 (1.1)	491 (4.2)	44 (1.4)	454 (4.3)
Italy	479 (3.8)	471 (5.0)	482 (5.6)	481 (3.6)	484 (4.5)	501 (5.0)	5 (0.5)	400 (9.5)	39 (1.2)	488 (4.5)	57 (1.3)	482 (4.0)
Japan	579 (1.7)	570 (2.6)	575 (5.1)	569 (3.3)	555 (2.3)	558 (2.4)	26 (1.2)	558 (3.8)	54 (0.9)	586 (2.0)	20 (0.9)	585 (2.5)
Jordan	432 (3.6)	432 (3.2)	449 (7.1)	439 (5.3)	436 (7.8)	438 (4.4)	8 (0.6)	374 (9.8)	33 (0.8)	441 (4.6)	60 (1.0)	445 (4.3)
Korea, Republic of	587 (2.0)	570 (2.7)	573 (3.9)	585 (2.7)	576 (4.2)	571 (2.8)	34 (1.0)	560 (2.6)	45 (0.7)	598 (2.0)	21 (0.9)	610 (4.1)
Latvia (Latvian-speaking schools) ²	505 (3.4)	496 (3.7)	522 (5.6)	499 (4.3)	495 (4.2)	505 (3.5)	3 (0.4)	480 (13.8)	58 (1.3)	516 (4.1)	40 (1.3)	483 (4.1)
Lithuania ²	482 (4.3)	479 (4.3)	496 (5.8)	487 (3.7)	493 (3.6)	467 (4.0)	3 (0.5)	417 (15.8)	68 (1.4)	486 (4.4)	29 (1.3)	483 (5.3)
Macedonia, Republic of	447 (4.2)	437 (4.7)	460 (6.1)	465 (4.0)	442 (6.2)	451 (5.2)	6 (0.4)	429 (9.2)	49 (1.1)	461 (4.6)	45 (1.2)	448 (4.1)
Malaysia	519 (4.4)	532 (4.7)	497 (4.4)	505 (4.8)	491 (4.0)	514 (4.6)	2 (0.2)	— (—)	28 (0.9)	523 (6.5)	71 (1.0)	519 (4.2)
Moldova	469 (3.9)	465 (4.2)	481 (5.0)	477 (3.7)	450 (5.7)	479 (4.9)	8 (0.7)	452 (7.6)	48 (1.4)	476 (4.1)	44 (1.6)	473 (5.0)
Morocco	337 (2.6)	335 (3.6)	407 (2.2)	353 (4.7)	383 (3.5)	348 (3.5)	13 (0.9)	324 (8.0)	29 (0.9)	341 (6.6)	58 (1.5)	350 (3.2)
Netherlands	540 (7.1)	545 (7.1)	515 (5.5)	522 (7.7)	538 (7.9)	538 (5.8)	8 (1.1)	559 (14.0)	78 (1.3)	546 (6.7)	14 (1.5)	507 (12.2)
New Zealand	491 (5.2)	493 (5.0)	478 (4.2)	497 (4.7)	497 (5.0)	496 (5.3)	14 (0.9)	444 (6.7)	66 (1.2)	507 (5.3)	20 (1.2)	480 (6.6)
Philippines	345 (6.0)	378 (6.3)	383 (3.4)	345 (5.8)	406 (3.5)	355 (6.2)	5 (0.4)	288 (13.2)	42 (0.8)	363 (6.2)	53 (0.8)	347 (6.7)
Romania	472 (5.8)	458 (5.7)	487 (6.0)	481 (5.2)	453 (4.7)	491 (4.9)	9 (0.7)	417 (7.7)	25 (1.5)	457 (6.2)	66 (1.8)	494 (5.4)
Russian Federation	526 (5.9)	513 (6.4)	522 (6.0)	529 (4.9)	501 (4.8)	527 (6.0)	6 (0.5)	483 (10.0)	49 (1.3)	537 (6.7)	45 (1.5)	530 (5.2)
Singapore	604 (6.3)	608 (5.6)	560 (6.7)	576 (6.2)	562 (6.2)	599 (6.3)	5 (0.5)	562 (10.7)	34 (1.0)	612 (7.6)	61 (1.1)	604 (5.7)
Slovak Republic	534 (4.0)	525 (4.8)	527 (7.3)	525 (4.6)	521 (4.6)	537 (3.3)	6 (0.6)	535 (8.3)	70 (0.8)	542 (3.9)	23 (0.9)	513 (4.7)
Slovenia	530 (2.8)	527 (3.7)	506 (6.2)	525 (2.9)	530 (4.2)	523 (3.7)	8 (0.7)	530 (7.7)	63 (1.1)	541 (3.3)	29 (1.0)	511 (4.1)
South Africa	275 (6.8)	300 (6.0)	335 (6.6)	293 (7.7)	356 (3.8)	329 (4.8)	10 (0.8)	241 (14.1)	37 (0.7)	293 (8.6)	53 (1.1)	273 (7.9)
Thailand	467 (5.1)	471 (5.3)	484 (4.4)	456 (4.9)	476 (4.0)	463 (6.2)	6 (0.4)	424 (5.6)	45 (1.1)	459 (5.8)	49 (1.2)	482 (5.8)
Tunisia	448 (2.4)	443 (2.8)	484 (4.4)	455 (2.7)	446 (5.1)	442 (3.1)	7 (0.5)	439 (5.3)	27 (0.8)	452 (3.4)	66 (0.9)	460 (2.9)
Turkey	429 (4.3)	430 (4.3)	428 (5.7)	432 (4.6)	446 (3.3)	436 (6.5)	6 (0.6)	398 (7.1)	41 (1.0)	422 (4.4)	52 (1.4)	448 (4.7)
United States	502 (4.0)	509 (4.2)	473 (4.4)	506 (4.1)	506 (5.2)	482 (3.9)	15 (1.1)	466 (4.8)	58 (0.7)	514 (4.0)	27 (1.1)	505 (4.5)

—Not available.
¹SAR=Special Administrative Region.
²Countries not meeting all International Association for the Evaluation of Educational Achievement's sampling specifications.
 SOURCE: International Association for the Evaluation of Educational Achievement, Third International Mathematics and Science Study, 1999. TIMSS 1999 International Mathematics Report, by Ina V.S. Mullis et al. Copyright © 2000 International Association for the Evaluation of Educational Achievement (IEA). (This table was prepared May 2001.)

NOTE: Data are for 8th-grade or equivalent in most countries. Possible scores range from 1 to 1,000. Standard errors appear in parentheses. Detail may not sum to totals due to rounding.