

# Appendix G

## Percentiles and Standard Deviations of Mathematics Achievement

## Appendix G.1: Percentiles of Mathematics Achievement

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Armenia	305 (6.0)	336 (3.8)	390 (5.4)	454 (5.3)	516 (4.0)	567 (5.7)	595 (2.3)
Australia	366 (6.2)	402 (5.4)	462 (3.1)	520 (3.2)	574 (4.0)	624 (5.6)	652 (6.0)
Austria	401 (4.3)	426 (5.3)	466 (3.7)	511 (3.2)	552 (2.9)	587 (2.9)	606 (4.4)
Azerbaijan	294 (9.1)	328 (6.0)	391 (6.8)	465 (4.9)	535 (6.3)	594 (9.6)	625 (7.0)
Bahrain	282 (7.1)	319 (6.0)	377 (4.3)	439 (3.1)	498 (4.3)	549 (5.1)	577 (4.0)
Belgium (Flemish)	450 (4.5)	472 (2.0)	509 (3.2)	550 (2.1)	590 (2.9)	625 (3.1)	645 (5.1)
Chile	326 (5.1)	355 (3.9)	407 (4.0)	463 (2.2)	518 (2.6)	565 (3.1)	592 (3.7)
Chinese Taipei	459 (6.4)	495 (2.8)	546 (3.6)	596 (1.5)	642 (2.3)	681 (3.0)	704 (2.5)
Croatia	376 (5.6)	402 (4.0)	446 (2.8)	493 (2.6)	537 (1.9)	573 (2.2)	595 (1.9)
Czech Republic	387 (6.0)	419 (5.0)	467 (2.8)	514 (2.4)	560 (2.3)	598 (2.3)	621 (3.7)
Denmark	413 (5.3)	445 (6.1)	493 (2.8)	541 (1.7)	585 (3.0)	624 (3.7)	646 (4.5)
England	385 (5.9)	423 (5.1)	483 (6.4)	549 (3.5)	605 (2.5)	652 (5.2)	677 (5.7)
Finland	430 (7.5)	456 (4.4)	501 (3.0)	549 (2.4)	592 (2.7)	631 (3.0)	654 (3.2)
Georgia	293 (8.4)	331 (5.8)	392 (6.0)	456 (3.8)	512 (2.7)	559 (4.6)	589 (6.0)
Germany	420 (7.8)	446 (4.6)	488 (2.9)	530 (3.2)	570 (2.3)	606 (3.4)	626 (2.1)
Hong Kong SAR	488 (11.0)	519 (5.7)	563 (3.3)	606 (3.3)	645 (3.4)	681 (3.6)	702 (2.7)
Hungary	352 (8.3)	397 (6.3)	462 (3.8)	523 (4.3)	577 (2.8)	623 (4.0)	650 (2.8)
Iran, Islamic Rep. of	271 (6.4)	306 (7.2)	370 (3.3)	435 (2.8)	496 (3.9)	547 (4.6)	575 (2.9)
Ireland	390 (4.1)	425 (4.7)	479 (3.0)	533 (3.9)	580 (2.9)	622 (4.7)	648 (4.7)
Italy	386 (6.2)	414 (4.0)	461 (4.6)	510 (3.6)	557 (3.3)	598 (1.9)	622 (3.6)
Japan	460 (6.9)	492 (3.7)	540 (2.1)	588 (1.7)	635 (2.4)	675 (1.8)	700 (4.7)
Kazakhstan	363 (7.7)	390 (5.3)	442 (6.6)	502 (6.3)	560 (6.5)	608 (7.8)	637 (7.9)
Korea, Rep. of	489 (4.6)	517 (3.2)	561 (2.4)	607 (2.3)	651 (2.1)	691 (3.2)	714 (3.9)
Kuwait	170 (6.9)	207 (4.5)	271 (4.4)	346 (4.2)	415 (3.1)	470 (4.3)	500 (5.0)
Lithuania	405 (4.5)	436 (3.6)	486 (2.9)	537 (3.8)	585 (2.7)	626 (3.3)	650 (2.1)
Malta	357 (4.7)	391 (2.6)	446 (2.9)	502 (1.9)	549 (2.2)	590 (3.3)	613 (2.6)
Morocco	177 (3.1)	206 (3.0)	261 (4.3)	329 (4.5)	404 (6.2)	472 (7.5)	511 (8.2)
Netherlands	449 (3.2)	470 (2.3)	505 (2.6)	543 (2.5)	577 (1.9)	605 (2.8)	623 (2.7)
New Zealand	339 (6.7)	374 (5.8)	432 (2.3)	492 (2.4)	545 (2.7)	589 (2.4)	614 (3.5)
Northern Ireland	411 (9.8)	451 (5.1)	511 (3.8)	567 (3.4)	622 (3.0)	668 (5.5)	693 (4.1)
Norway	376 (5.9)	406 (5.0)	451 (4.0)	497 (2.5)	542 (5.5)	581 (5.3)	604 (6.5)
Oman	208 (5.3)	245 (4.3)	314 (4.2)	390 (4.1)	459 (2.8)	515 (2.5)	548 (3.2)
Poland	352 (3.8)	384 (3.5)	435 (2.7)	485 (1.7)	531 (1.8)	570 (3.0)	595 (3.8)
Portugal	417 (4.6)	445 (5.3)	488 (3.9)	534 (3.5)	578 (4.2)	619 (4.9)	642 (6.7)
Qatar	237 (5.9)	274 (5.9)	338 (4.2)	416 (5.3)	487 (6.3)	547 (3.8)	582 (6.5)
Romania	287 (13.5)	336 (13.4)	416 (8.5)	494 (6.1)	557 (6.0)	607 (6.8)	636 (5.7)
Russian Federation	417 (6.7)	447 (6.1)	493 (4.0)	544 (3.4)	593 (4.5)	635 (4.3)	660 (6.5)
Saudi Arabia	245 (8.7)	282 (6.6)	346 (5.2)	412 (5.8)	473 (5.9)	532 (7.5)	568 (8.0)
Serbia	362 (9.8)	401 (5.7)	461 (2.9)	520 (5.5)	574 (2.2)	622 (3.0)	652 (3.9)
Singapore	464 (7.4)	502 (4.6)	559 (5.3)	612 (3.3)	661 (4.2)	701 (3.0)	723 (3.2)
Slovak Republic	365 (8.4)	402 (5.5)	460 (3.6)	513 (3.0)	561 (2.2)	600 (4.0)	626 (5.2)
Slovenia	395 (4.4)	423 (2.9)	468 (2.3)	517 (1.7)	561 (3.6)	597 (2.6)	619 (3.3)
Spain	362 (10.3)	388 (3.8)	435 (5.8)	486 (2.8)	532 (2.1)	572 (2.2)	593 (3.6)
Sweden	388 (6.9)	416 (3.6)	462 (2.8)	507 (2.6)	549 (2.4)	587 (3.1)	610 (4.8)
Thailand	318 (7.5)	352 (9.7)	406 (5.5)	462 (4.8)	514 (5.4)	557 (5.3)	580 (6.2)
Tunisia	198 (3.3)	234 (5.1)	294 (3.7)	362 (5.8)	427 (4.8)	480 (4.2)	510 (4.4)
Turkey	289 (13.3)	338 (7.4)	408 (6.1)	477 (4.1)	540 (3.6)	591 (4.1)	618 (4.0)
United Arab Emirates	270 (2.7)	304 (3.3)	366 (2.8)	437 (3.0)	504 (2.5)	560 (2.1)	593 (3.2)
United States	410 (3.3)	440 (3.6)	492 (2.2)	544 (2.9)	593 (2.3)	635 (2.7)	660 (1.5)
Yemen	74 (6.0)	108 (8.7)	170 (6.7)	243 (5.8)	322 (6.5)	395 (5.6)	438 (9.5)

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.  
Note: Percentiles are defined in terms of percentages of students at or below a point on the scale.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

**Appendix G.1: Percentiles of Mathematics Achievement (Continued)**

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
<b>Sixth Grade Participants</b>							
Botswana	268 (3.6)	298 (7.0)	355 (5.5)	424 (4.7)	485 (5.0)	533 (5.4)	559 (9.8)
Honduras	257 (7.4)	288 (7.9)	339 (8.1)	398 (5.7)	454 (4.3)	502 (6.8)	531 (9.1)
Yemen	184 (11.8)	219 (9.1)	282 (5.5)	352 (6.5)	418 (7.2)	472 (3.7)	501 (5.3)
<b>Benchmarking Participants</b>							
Alberta, Canada	397 (8.6)	423 (5.0)	464 (3.2)	509 (3.1)	551 (3.4)	587 (2.7)	609 (3.7)
Ontario, Canada	393 (4.3)	422 (5.8)	470 (4.1)	521 (2.9)	568 (5.8)	609 (5.9)	634 (6.1)
Quebec, Canada	432 (4.1)	454 (3.6)	492 (2.9)	534 (2.4)	574 (2.8)	610 (3.5)	631 (4.5)
Abu Dhabi, UAE	256 (5.5)	289 (6.1)	348 (5.3)	420 (5.4)	486 (6.1)	541 (8.9)	572 (5.5)
Dubai, UAE	292 (3.5)	330 (3.6)	400 (3.8)	474 (2.2)	541 (2.6)	592 (1.9)	623 (4.4)
Florida, US	422 (2.7)	448 (4.7)	495 (3.6)	545 (2.9)	596 (4.9)	641 (4.1)	666 (3.3)
North Carolina, US	432 (8.2)	460 (6.1)	507 (5.8)	556 (3.2)	603 (3.2)	644 (5.6)	668 (6.7)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Armenia	310 (6.1)	344 (4.6)	405 (4.6)	473 (3.3)	531 (2.6)	578 (3.9)	608 (3.7)
Australia	369 (4.8)	397 (3.3)	445 (5.1)	503 (6.1)	560 (7.0)	618 (7.8)	652 (12.0)
Bahrain	246 (5.9)	279 (5.7)	339 (3.3)	409 (2.1)	479 (2.0)	539 (3.6)	570 (4.0)
Chile	290 (8.1)	315 (3.6)	361 (3.1)	414 (4.0)	469 (4.1)	522 (4.2)	553 (4.3)
Chinese Taipei	413 (7.0)	459 (7.0)	543 (5.2)	623 (3.1)	683 (3.5)	734 (4.9)	765 (9.6)
England	361 (8.3)	393 (7.0)	448 (8.3)	510 (6.3)	567 (7.4)	616 (6.6)	640 (7.1)
Finland	405 (7.2)	430 (3.7)	470 (5.3)	516 (3.0)	559 (2.0)	596 (3.2)	617 (2.1)
Georgia	254 (6.0)	289 (3.4)	356 (5.1)	435 (5.7)	507 (4.2)	563 (5.2)	598 (7.5)
Ghana	194 (5.4)	222 (3.9)	271 (5.0)	328 (4.6)	389 (4.7)	442 (5.8)	474 (6.7)
Hong Kong SAR	428 (13.6)	470 (10.9)	537 (6.2)	595 (4.3)	644 (5.5)	684 (3.6)	706 (5.8)
Hungary	348 (7.1)	385 (5.1)	448 (3.7)	512 (3.1)	567 (4.1)	614 (3.9)	642 (5.2)
Indonesia	248 (9.7)	280 (6.0)	330 (5.3)	386 (4.9)	442 (4.4)	494 (6.8)	524 (4.2)
Iran, Islamic Rep. of	266 (5.5)	296 (4.6)	348 (4.5)	412 (4.8)	476 (5.5)	537 (7.1)	578 (11.3)
Israel	338 (9.9)	381 (6.6)	452 (6.8)	525 (5.6)	585 (4.0)	636 (6.5)	663 (4.6)
Italy	372 (6.1)	400 (6.4)	450 (2.9)	502 (3.9)	549 (2.3)	590 (4.2)	615 (3.1)
Japan	425 (3.9)	458 (2.7)	515 (3.3)	574 (1.8)	630 (2.2)	674 (3.4)	701 (5.6)
Jordan	232 (8.4)	271 (8.0)	340 (6.4)	413 (4.8)	479 (2.6)	528 (2.8)	556 (3.7)
Kazakhstan	353 (4.3)	381 (4.9)	431 (5.0)	490 (5.8)	544 (5.4)	587 (5.3)	611 (7.5)
Korea, Rep. of	455 (4.1)	492 (3.0)	555 (3.1)	619 (2.8)	676 (3.6)	724 (5.5)	750 (3.7)
Lebanon	327 (6.0)	352 (3.8)	396 (4.4)	448 (4.1)	502 (3.3)	546 (7.4)	573 (5.2)
Lithuania	369 (4.5)	401 (4.4)	450 (3.1)	505 (3.0)	558 (3.3)	602 (3.3)	625 (4.6)
Macedonia, Rep. of	239 (11.1)	279 (9.6)	352 (5.3)	432 (5.5)	504 (6.6)	561 (5.5)	596 (7.6)
Malaysia	290 (7.1)	319 (4.8)	373 (6.0)	440 (8.2)	507 (6.9)	560 (6.0)	589 (7.1)
Morocco	236 (3.0)	264 (3.0)	312 (2.8)	367 (2.2)	428 (3.1)	484 (3.5)	520 (4.0)
New Zealand	346 (7.8)	375 (5.1)	428 (5.9)	489 (6.8)	548 (7.2)	598 (5.4)	624 (6.3)
Norway	366 (4.2)	390 (4.1)	431 (3.2)	477 (2.8)	520 (2.9)	556 (2.8)	577 (3.2)
Oman	186 (4.8)	224 (4.8)	290 (3.8)	368 (3.1)	444 (3.0)	505 (2.4)	541 (2.6)
Palestinian Nat'l Auth.	236 (5.8)	272 (3.5)	336 (5.5)	406 (3.3)	476 (4.9)	533 (4.6)	562 (4.3)
Qatar	227 (7.9)	265 (6.0)	331 (5.7)	412 (5.7)	489 (2.9)	552 (5.6)	586 (10.8)
Romania	291 (6.1)	327 (5.3)	386 (6.3)	458 (3.7)	529 (4.7)	592 (6.7)	626 (6.3)
Russian Federation	399 (5.5)	431 (6.4)	485 (3.6)	543 (5.3)	596 (3.7)	641 (5.6)	666 (4.2)
Saudi Arabia	243 (6.8)	274 (5.3)	329 (5.0)	392 (4.5)	458 (5.7)	516 (5.1)	551 (10.6)
Singapore	453 (9.4)	494 (10.2)	559 (6.6)	620 (4.5)	672 (2.7)	713 (3.1)	734 (3.6)
Slovenia	387 (4.3)	412 (3.5)	457 (3.3)	506 (2.1)	554 (3.0)	595 (3.1)	619 (3.3)
Sweden	368 (3.0)	395 (2.5)	440 (3.2)	487 (2.0)	532 (2.4)	569 (2.2)	590 (2.9)
Syrian Arab Republic	217 (8.9)	253 (8.6)	313 (5.9)	381 (4.5)	451 (4.7)	505 (6.3)	535 (6.0)
Thailand	290 (6.7)	318 (3.5)	368 (4.0)	425 (5.3)	483 (4.7)	536 (8.7)	573 (10.9)
Tunisia	305 (3.6)	330 (2.9)	373 (2.9)	421 (4.5)	475 (3.3)	525 (5.1)	554 (6.2)
Turkey	273 (5.0)	311 (5.5)	374 (2.4)	447 (5.3)	529 (6.9)	603 (5.4)	645 (10.0)
Ukraine	326 (5.2)	362 (7.0)	421 (5.5)	482 (3.8)	542 (4.5)	592 (5.9)	621 (4.6)
United Arab Emirates	309 (2.6)	340 (3.1)	394 (2.1)	457 (2.7)	518 (2.5)	568 (3.7)	598 (3.3)
United States	381 (4.3)	409 (4.1)	457 (3.7)	511 (3.4)	562 (3.1)	607 (4.9)	635 (5.9)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

**Ninth Grade Participants**

Botswana	265 (3.9)	295 (4.1)	345 (2.6)	400 (2.9)	449 (2.5)	494 (3.7)	521 (4.0)
Honduras	215 (4.5)	241 (5.6)	285 (5.0)	336 (3.7)	390 (4.4)	437 (7.8)	467 (10.2)
South Africa	229 (4.2)	252 (3.2)	293 (2.5)	343 (3.1)	398 (2.9)	463 (5.7)	516 (8.2)

**Benchmarking Participants**

Alberta, Canada	400 (2.1)	423 (3.7)	463 (3.2)	506 (2.2)	549 (2.9)	584 (3.0)	606 (3.5)
Ontario, Canada	391 (4.7)	419 (2.6)	465 (3.2)	514 (2.3)	561 (2.9)	599 (3.6)	621 (4.0)
Quebec, Canada	425 (3.1)	449 (3.8)	491 (2.5)	534 (2.1)	575 (2.6)	609 (3.6)	628 (2.5)
Abu Dhabi, UAE	306 (4.9)	336 (6.2)	388 (4.6)	449 (3.8)	510 (5.4)	560 (5.6)	589 (6.8)
Dubai, UAE	317 (5.5)	352 (2.7)	415 (4.0)	481 (2.2)	544 (3.5)	594 (5.4)	624 (4.8)
Alabama, US	335 (4.7)	362 (6.6)	410 (9.8)	466 (7.9)	521 (8.6)	568 (11.9)	596 (10.2)
California, US	357 (9.3)	389 (5.5)	439 (6.1)	494 (5.9)	548 (6.6)	595 (8.8)	624 (6.3)
Colorado, US	391 (5.7)	415 (6.4)	464 (6.7)	521 (6.6)	572 (5.8)	615 (4.6)	639 (4.0)
Connecticut, US	374 (10.8)	404 (6.5)	459 (6.4)	521 (6.0)	579 (5.2)	626 (5.0)	650 (7.1)
Florida, US	393 (8.1)	418 (6.1)	460 (5.4)	511 (7.1)	564 (9.0)	614 (9.0)	645 (14.9)
Indiana, US	400 (7.6)	427 (4.7)	473 (5.8)	524 (5.9)	570 (7.1)	612 (7.0)	635 (5.9)
Massachusetts, US	435 (7.8)	466 (8.4)	513 (4.4)	563 (5.5)	611 (8.0)	653 (5.2)	677 (8.6)
Minnesota, US	419 (7.3)	448 (6.6)	497 (6.4)	548 (5.4)	595 (5.3)	635 (5.5)	658 (7.0)
North Carolina, US	403 (7.3)	434 (8.1)	483 (7.6)	537 (7.8)	591 (8.5)	639 (7.5)	667 (11.3)

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.  
Note: Percentiles are defined in terms of percentages of students at or below a point on the scale.

## Appendix G.3: Standard Deviations of Mathematics Achievement

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Armenia	452 (3.5)	89 (1.5)	454 (4.1)	87 (2.0)	451 (3.6)	90 (1.7)
Australia	516 (2.9)	86 (2.0)	513 (3.3)	83 (2.2)	519 (3.6)	89 (2.5)
Austria	508 (2.6)	63 (1.1)	504 (2.7)	61 (1.4)	513 (3.3)	63 (1.3)
Azerbaijan	463 (5.8)	101 (2.6)	466 (6.4)	101 (3.1)	460 (5.9)	101 (2.6)
Bahrain	436 (3.3)	90 (1.9)	440 (4.5)	81 (2.2)	432 (4.0)	98 (2.7)
Belgium (Flemish)	549 (1.9)	60 (1.0)	545 (2.2)	59 (1.3)	553 (2.4)	60 (1.2)
Chile	462 (2.3)	81 (1.5)	457 (2.7)	77 (1.7)	466 (2.8)	83 (1.9)
Chinese Taipei	591 (2.0)	73 (0.9)	592 (2.5)	72 (1.7)	590 (2.4)	74 (1.5)
Croatia	490 (1.9)	67 (1.5)	485 (2.4)	65 (1.8)	495 (2.4)	69 (1.8)
Czech Republic	511 (2.4)	70 (1.7)	505 (2.8)	69 (2.0)	516 (2.7)	71 (1.9)
Denmark	537 (2.6)	71 (2.0)	534 (2.9)	70 (2.6)	540 (2.9)	71 (2.0)
England	542 (3.5)	89 (1.7)	541 (4.2)	85 (2.4)	544 (3.5)	93 (2.0)
Finland	545 (2.3)	68 (1.5)	542 (2.5)	66 (1.5)	549 (2.9)	71 (2.4)
Georgia	450 (3.7)	90 (2.6)	454 (3.2)	85 (2.3)	447 (4.9)	94 (3.6)
Germany	528 (2.2)	62 (1.4)	523 (2.7)	61 (1.9)	532 (2.6)	63 (1.6)
Hong Kong SAR	602 (3.4)	66 (3.1)	598 (3.2)	63 (3.0)	604 (3.9)	69 (3.7)
Hungary	515 (3.4)	90 (2.6)	514 (3.6)	87 (3.1)	517 (3.9)	93 (3.1)
Iran, Islamic Rep. of	431 (3.5)	93 (1.9)	431 (5.2)	90 (2.7)	431 (5.4)	95 (2.6)
Ireland	527 (2.6)	78 (1.6)	526 (3.7)	75 (1.7)	529 (3.3)	81 (2.1)
Italy	508 (2.6)	72 (1.9)	503 (3.1)	71 (2.1)	512 (2.9)	73 (2.2)
Japan	585 (1.7)	72 (1.1)	584 (2.0)	70 (1.2)	587 (2.5)	75 (1.7)
Kazakhstan	501 (4.5)	84 (2.6)	498 (4.4)	80 (2.6)	504 (4.8)	87 (3.1)
Korea, Rep. of	605 (1.9)	68 (1.4)	601 (2.1)	66 (1.4)	608 (2.2)	70 (1.7)
Kuwait	342 (3.4)	101 (1.7)	358 (3.6)	96 (1.9)	323 (5.8)	104 (2.4)
Lithuania	534 (2.4)	74 (1.3)	533 (2.6)	72 (1.4)	534 (2.9)	76 (2.1)
Malta	496 (1.3)	78 (0.9)	492 (1.6)	75 (1.3)	499 (2.1)	80 (1.4)
Morocco	335 (4.0)	103 (2.8)	338 (4.6)	101 (2.8)	331 (4.3)	104 (3.3)
Netherlands	540 (1.7)	53 (1.0)	536 (2.1)	53 (1.2)	544 (2.1)	53 (1.1)
New Zealand	486 (2.6)	83 (1.3)	486 (3.3)	81 (1.7)	486 (2.8)	86 (1.7)
Northern Ireland	562 (2.9)	86 (1.8)	562 (3.3)	83 (1.9)	563 (3.6)	88 (2.8)
Norway	495 (2.8)	68 (1.9)	492 (2.8)	66 (2.4)	499 (3.5)	71 (2.3)
Oman	385 (2.9)	104 (1.2)	398 (3.2)	97 (1.8)	372 (3.4)	109 (1.8)
Poland	481 (2.2)	73 (1.1)	476 (2.4)	70 (1.5)	486 (2.5)	76 (1.5)
Portugal	532 (3.4)	69 (1.9)	529 (4.1)	67 (2.5)	535 (3.4)	70 (1.9)
Qatar	413 (3.5)	106 (2.2)	420 (4.7)	100 (3.0)	407 (4.2)	110 (3.1)
Romania	482 (5.8)	105 (3.7)	481 (6.7)	106 (4.6)	484 (5.9)	105 (3.6)
Russian Federation	542 (3.7)	74 (1.5)	543 (3.7)	72 (1.8)	542 (4.1)	75 (1.6)
Saudi Arabia	410 (5.3)	100 (4.1)	418 (4.6)	84 (2.6)	402 (10.0)	114 (7.4)
Serbia	516 (3.0)	89 (1.9)	513 (3.8)	87 (2.8)	519 (3.5)	91 (2.2)
Singapore	606 (3.2)	78 (1.7)	608 (3.6)	75 (1.8)	604 (3.5)	81 (2.0)
Slovak Republic	507 (3.8)	80 (2.6)	503 (4.0)	79 (3.0)	511 (3.9)	80 (2.6)
Slovenia	513 (2.2)	69 (1.4)	508 (2.2)	67 (2.0)	518 (3.1)	70 (1.7)
Spain	482 (2.9)	70 (1.5)	477 (3.1)	68 (1.7)	488 (3.4)	72 (1.8)
Sweden	504 (2.0)	67 (1.3)	501 (2.5)	66 (1.8)	506 (2.4)	67 (1.5)
Thailand	458 (4.8)	80 (2.8)	465 (4.8)	74 (3.1)	451 (5.6)	85 (3.5)
Tunisia	359 (3.9)	95 (1.8)	363 (4.5)	92 (2.2)	356 (4.4)	97 (2.3)
Turkey	469 (4.7)	101 (4.1)	470 (5.2)	99 (4.9)	469 (4.8)	102 (4.2)
United Arab Emirates	434 (2.0)	99 (1.2)	438 (2.8)	91 (1.4)	430 (3.5)	106 (1.8)
United States	541 (1.8)	76 (1.1)	536 (2.1)	73 (1.3)	545 (1.9)	77 (1.3)
Yemen	248 (6.0)	110 (2.6)	255 (7.0)	108 (3.5)	243 (7.0)	111 (3.1)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
<b>Sixth Grade Participants</b>						
Botswana	419 (3.7)	89 (2.0)	428 (4.0)	86 (2.2)	410 (4.2)	92 (2.2)
Honduras	396 (5.5)	84 (3.1)	390 (5.9)	82 (3.7)	403 (5.8)	84 (3.6)
Yemen	348 (5.7)	97 (2.4)	354 (7.5)	95 (3.9)	345 (6.4)	98 (2.5)
<b>Benchmarking Participants</b>						
Alberta, Canada	507 (2.5)	65 (1.5)	502 (3.1)	64 (2.0)	511 (2.7)	65 (1.5)
Ontario, Canada	518 (3.1)	73 (1.5)	515 (3.3)	70 (1.4)	521 (3.4)	76 (2.0)
Quebec, Canada	533 (2.4)	60 (1.0)	527 (2.8)	59 (1.3)	538 (2.7)	61 (1.4)
Abu Dhabi, UAE	417 (4.6)	97 (2.2)	425 (5.0)	87 (2.5)	409 (6.7)	105 (2.8)
Dubai, UAE	468 (1.6)	101 (1.6)	466 (3.5)	95 (2.0)	470 (3.9)	105 (2.1)
Florida, US	545 (2.9)	74 (1.4)	542 (2.8)	73 (1.6)	549 (3.9)	76 (2.0)
North Carolina, US	554 (4.2)	72 (2.0)	548 (4.0)	71 (2.2)	560 (4.9)	72 (2.5)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

**Appendix G.4: Standard Deviations of Mathematics Achievement**

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Armenia	467 (2.7)	91 (1.7)	472 (3.1)	87 (1.8)	462 (3.2)	94 (2.2)
Australia	505 (5.1)	85 (3.4)	500 (4.7)	83 (3.6)	509 (7.3)	88 (4.8)
Bahrain	409 (2.0)	100 (1.7)	431 (2.5)	87 (1.9)	388 (3.1)	106 (2.3)
Chile	416 (2.6)	80 (1.9)	409 (3.2)	80 (2.4)	424 (3.0)	79 (2.0)
Chinese Taipei	609 (3.2)	106 (2.0)	613 (3.7)	100 (2.7)	606 (3.8)	111 (2.1)
England	507 (5.5)	85 (3.4)	508 (5.7)	82 (3.3)	505 (6.6)	88 (4.0)
Finland	514 (2.5)	65 (1.2)	516 (2.7)	64 (1.5)	512 (2.7)	66 (1.5)
Georgia	431 (3.8)	106 (2.1)	430 (4.1)	101 (2.2)	432 (4.4)	110 (2.6)
Ghana	331 (4.3)	86 (2.1)	318 (4.8)	85 (2.4)	342 (4.3)	85 (2.2)
Hong Kong SAR	586 (3.8)	84 (3.8)	588 (5.0)	81 (4.1)	583 (4.3)	88 (4.1)
Hungary	505 (3.5)	90 (2.2)	502 (3.9)	89 (3.0)	508 (3.9)	90 (2.7)
Indonesia	386 (4.3)	84 (2.4)	392 (4.9)	83 (2.4)	379 (4.5)	85 (3.1)
Iran, Islamic Rep. of	415 (4.3)	95 (2.4)	411 (5.9)	92 (3.3)	418 (5.9)	97 (3.6)
Israel	516 (4.1)	98 (2.4)	520 (3.9)	91 (2.7)	512 (5.2)	105 (2.8)
Italy	498 (2.4)	73 (1.8)	493 (2.9)	72 (2.3)	504 (2.8)	74 (2.2)
Japan	570 (2.6)	85 (1.5)	566 (3.1)	80 (2.0)	574 (3.5)	89 (1.8)
Jordan	406 (3.7)	99 (1.9)	420 (4.3)	88 (2.1)	392 (5.9)	107 (2.5)
Kazakhstan	487 (4.0)	80 (1.9)	486 (4.1)	78 (1.9)	488 (4.5)	82 (2.4)
Korea, Rep. of	613 (2.9)	90 (1.5)	610 (3.5)	88 (1.7)	616 (3.1)	92 (1.9)
Lebanon	449 (3.7)	75 (1.6)	444 (4.2)	73 (1.9)	456 (4.7)	77 (2.1)
Lithuania	502 (2.5)	79 (1.4)	507 (2.6)	76 (1.7)	498 (3.2)	81 (1.9)
Macedonia, Rep. of	426 (5.2)	109 (2.7)	430 (5.8)	109 (2.9)	423 (5.6)	108 (3.2)
Malaysia	440 (5.4)	92 (2.7)	449 (5.2)	86 (2.4)	430 (6.2)	97 (3.3)
Morocco	371 (2.0)	86 (1.0)	371 (2.3)	87 (1.3)	371 (2.7)	84 (1.2)
New Zealand	488 (5.5)	85 (2.1)	478 (5.5)	82 (2.4)	496 (6.2)	87 (2.1)
Norway	475 (2.4)	65 (1.3)	476 (2.9)	64 (1.5)	473 (2.9)	65 (1.7)
Oman	366 (2.8)	108 (1.6)	397 (3.1)	94 (1.5)	334 (3.8)	113 (1.7)
Palestinian Nat'l Auth.	404 (3.5)	100 (2.0)	415 (4.2)	94 (2.2)	392 (5.6)	106 (3.3)
Qatar	410 (3.1)	110 (2.1)	415 (5.8)	107 (2.8)	404 (5.5)	113 (2.5)
Romania	458 (4.0)	102 (2.3)	464 (4.6)	103 (2.3)	453 (4.2)	101 (2.7)
Russian Federation	539 (3.6)	81 (1.7)	539 (3.8)	79 (1.6)	539 (3.9)	83 (2.4)
Saudi Arabia	394 (4.6)	93 (2.5)	401 (4.1)	83 (2.0)	387 (8.0)	102 (3.8)
Singapore	611 (3.8)	84 (2.4)	615 (3.7)	78 (2.3)	607 (4.5)	90 (2.9)
Slovenia	505 (2.2)	70 (1.2)	502 (2.4)	70 (1.5)	507 (2.8)	71 (1.4)
Sweden	484 (1.9)	68 (1.0)	486 (2.1)	67 (1.1)	482 (2.4)	68 (1.4)
Syrian Arab Republic	380 (4.5)	97 (2.2)	375 (5.3)	96 (3.0)	385 (5.3)	98 (2.4)
Thailand	427 (4.3)	86 (2.9)	435 (4.2)	81 (2.9)	417 (5.3)	90 (3.2)
Tunisia	425 (2.8)	75 (1.8)	417 (3.1)	75 (1.9)	433 (3.1)	75 (2.1)
Turkey	452 (3.9)	113 (3.1)	457 (3.8)	112 (3.3)	448 (4.7)	114 (3.4)
Ukraine	479 (3.9)	90 (2.1)	478 (4.0)	85 (2.5)	481 (4.9)	95 (2.8)
United Arab Emirates	456 (2.1)	88 (1.2)	464 (2.7)	80 (1.3)	447 (3.1)	95 (1.8)
United States	509 (2.6)	77 (1.6)	508 (2.9)	76 (1.9)	511 (2.8)	78 (1.6)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
<b>Ninth Grade Participants</b>						
Botswana	397 (2.5)	78 (1.7)	403 (2.9)	75 (1.7)	390 (3.0)	79 (2.1)
Honduras	338 (3.7)	77 (2.5)	328 (4.1)	76 (2.8)	351 (4.1)	76 (2.5)
South Africa	352 (2.5)	86 (1.9)	354 (3.0)	83 (2.5)	350 (3.4)	89 (2.4)
<b>Benchmarking Participants</b>						
Alberta, Canada	505 (2.6)	63 (1.3)	504 (3.3)	63 (1.4)	506 (2.7)	64 (1.7)
Ontario, Canada	512 (2.5)	71 (1.5)	512 (2.7)	69 (1.6)	512 (3.1)	72 (2.0)
Quebec, Canada	532 (2.3)	62 (1.5)	531 (2.9)	61 (1.8)	532 (2.5)	62 (1.7)
Abu Dhabi, UAE	449 (3.7)	87 (2.1)	450 (3.9)	78 (2.3)	448 (5.7)	94 (2.9)
Dubai, UAE	478 (2.1)	93 (1.9)	486 (4.3)	84 (2.4)	470 (5.4)	100 (2.6)
Alabama, US	466 (5.9)	79 (3.1)	467 (6.3)	78 (3.5)	465 (6.2)	80 (3.9)
California, US	493 (4.9)	81 (2.8)	491 (5.6)	79 (3.1)	494 (5.0)	82 (3.3)
Colorado, US	518 (4.9)	76 (2.2)	516 (5.4)	75 (3.1)	520 (5.0)	77 (2.0)
Connecticut, US	518 (4.8)	84 (2.9)	520 (5.2)	81 (3.2)	516 (5.4)	87 (3.3)
Florida, US	513 (6.4)	76 (3.1)	509 (6.6)	72 (3.0)	517 (7.3)	80 (3.7)
Indiana, US	522 (5.1)	71 (1.8)	518 (5.1)	70 (2.2)	526 (5.9)	71 (2.3)
Massachusetts, US	561 (5.3)	73 (2.7)	558 (6.0)	73 (3.3)	563 (5.5)	73 (3.6)
Minnesota, US	545 (4.6)	72 (2.8)	545 (4.9)	70 (3.0)	545 (5.1)	74 (3.1)
North Carolina, US	537 (6.8)	80 (3.9)	535 (6.2)	78 (4.0)	539 (8.3)	83 (5.1)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011





