

Appendix D.1: Percentiles of Mathematics Achievement

Country	5 th Percentile	10 th Percentile	25 th Percentile	50 th Percentile	75 th Percentile	90 th Percentile	95 th Percentile
Albania	346 (10.3)	382 (6.3)	441 (5.6)	500 (3.9)	552 (4.7)	597 (4.6)	627 (3.7)
Armenia	381 (4.0)	407 (4.6)	453 (3.5)	501 (2.8)	545 (2.6)	584 (3.4)	607 (4.9)
Australia	364 (6.0)	401 (5.9)	460 (3.6)	519 (3.0)	575 (3.4)	625 (3.7)	654 (5.8)
Austria	430 (4.8)	455 (3.5)	495 (2.9)	541 (2.4)	584 (2.7)	623 (2.1)	643 (3.5)
Azerbaijan	371 (4.8)	412 (5.6)	467 (3.6)	521 (2.7)	574 (2.5)	615 (3.1)	640 (4.0)
Bahrain	331 (6.2)	363 (5.3)	421 (3.5)	484 (2.7)	540 (2.9)	588 (3.3)	618 (4.5)
Belgium (Flemish)	419 (3.4)	445 (3.5)	487 (2.8)	534 (1.8)	580 (2.0)	619 (2.4)	641 (2.7)
Bosnia and Herzegovina	320 (4.9)	352 (3.7)	403 (3.0)	455 (2.8)	504 (2.6)	545 (2.9)	569 (3.7)
Bulgaria	360 (10.9)	397 (8.8)	461 (6.5)	524 (4.1)	575 (3.6)	618 (2.8)	642 (3.4)
Canada	383 (3.0)	412 (3.2)	460 (2.9)	514 (2.0)	564 (2.2)	608 (2.7)	633 (3.3)
Chile	318 (5.1)	344 (4.1)	389 (4.2)	441 (3.7)	493 (3.1)	537 (3.3)	565 (4.3)
Chinese Taipei	483 (5.6)	513 (4.9)	557 (2.7)	603 (1.7)	645 (3.2)	681 (2.4)	701 (2.6)
Croatia	398 (5.6)	424 (4.9)	465 (3.2)	511 (2.6)	556 (2.3)	595 (3.3)	617 (4.3)
Cyprus	397 (5.7)	428 (3.5)	480 (4.1)	535 (3.3)	587 (3.4)	632 (3.3)	657 (3.8)
Czech Republic	406 (5.8)	435 (5.0)	484 (3.5)	537 (2.7)	585 (2.8)	626 (3.8)	650 (3.9)
Denmark	402 (5.5)	429 (3.0)	474 (2.7)	526 (2.1)	577 (2.4)	618 (3.5)	644 (4.2)
England	411 (5.5)	445 (5.1)	499 (3.5)	558 (4.4)	615 (4.1)	665 (4.8)	693 (6.5)
Finland	402 (5.0)	431 (4.9)	483 (3.4)	535 (3.3)	585 (1.9)	628 (3.6)	653 (3.2)
France	347 (6.5)	379 (5.8)	431 (4.3)	488 (3.2)	540 (3.2)	586 (3.5)	611 (5.0)
Georgia	340 (6.2)	371 (7.2)	429 (5.3)	487 (3.4)	538 (3.9)	583 (4.9)	608 (4.4)
Germany	405 (4.5)	431 (3.7)	474 (2.9)	523 (2.8)	570 (2.8)	609 (2.9)	630 (3.2)
Hong Kong SAR	479 (5.2)	509 (5.8)	558 (4.1)	605 (3.8)	649 (3.7)	689 (3.6)	710 (4.3)
Hungary	388 (5.2)	418 (5.4)	472 (4.1)	529 (3.0)	578 (2.8)	621 (3.7)	645 (3.3)
Iran, Islamic Rep. of	278 (8.6)	316 (8.1)	379 (5.7)	447 (3.2)	512 (3.9)	563 (3.4)	592 (4.7)
Ireland	414 (5.6)	446 (5.2)	501 (3.5)	553 (2.3)	601 (2.1)	643 (4.2)	665 (3.4)
Italy	403 (4.8)	427 (3.6)	470 (3.2)	517 (2.8)	560 (2.8)	598 (3.4)	619 (4.4)
Japan	474 (3.7)	502 (3.3)	548 (2.5)	595 (2.0)	641 (2.3)	680 (2.9)	703 (3.1)
Kazakhstan	401 (4.4)	424 (4.1)	466 (2.8)	511 (3.0)	558 (3.3)	598 (3.8)	622 (3.3)
Korea, Rep. of	477 (5.7)	509 (4.1)	556 (3.0)	603 (2.3)	648 (2.7)	687 (3.3)	710 (4.0)
Kosovo	305 (7.7)	337 (5.1)	393 (4.1)	450 (3.4)	500 (3.5)	543 (3.6)	568 (3.1)
Kuwait	190 (6.7)	230 (7.8)	307 (6.1)	390 (5.2)	463 (6.0)	523 (6.5)	555 (6.5)
Latvia	427 (7.0)	454 (4.4)	501 (3.4)	551 (2.3)	594 (2.9)	629 (3.3)	650 (4.0)
Lithuania	410 (5.7)	442 (4.2)	493 (3.4)	546 (3.2)	596 (2.8)	636 (3.5)	660 (4.9)
Malta	373 (5.4)	404 (2.9)	460 (1.9)	516 (2.1)	563 (2.4)	602 (1.9)	625 (4.0)
Montenegro	298 (6.3)	340 (4.0)	402 (2.5)	461 (2.0)	512 (2.4)	554 (3.4)	578 (3.2)
Morocco	220 (7.2)	254 (6.1)	312 (4.5)	381 (4.3)	452 (5.1)	516 (8.0)	555 (11.3)
Netherlands	432 (4.3)	457 (4.4)	495 (2.7)	540 (3.2)	581 (2.5)	615 (3.5)	634 (3.7)
New Zealand	338 (4.7)	368 (4.4)	425 (3.4)	489 (3.2)	549 (3.3)	602 (3.6)	634 (4.2)
North Macedonia	295 (11.2)	339 (9.2)	411 (6.8)	479 (6.9)	540 (5.5)	591 (6.6)	622 (7.7)
Northern Ireland	410 (8.0)	449 (5.2)	510 (3.6)	572 (3.6)	627 (3.4)	672 (5.3)	699 (5.9)
Norway (5)	416 (5.9)	446 (4.2)	493 (3.5)	546 (2.3)	595 (2.7)	636 (2.8)	660 (3.6)
Oman	263 (5.5)	299 (4.2)	362 (3.6)	431 (3.7)	499 (5.1)	563 (7.9)	602 (10.6)
Pakistan	156 (12.0)	189 (10.1)	249 (12.6)	329 (15.5)	407 (15.6)	462 (10.2)	493 (11.0)
Philippines	121 (6.1)	156 (6.7)	216 (7.4)	293 (7.2)	376 (8.2)	444 (7.7)	480 (7.1)
Poland	386 (4.1)	418 (3.7)	471 (3.9)	523 (2.7)	573 (2.9)	617 (3.5)	642 (5.0)
Portugal	398 (4.8)	424 (4.5)	472 (3.1)	529 (3.5)	580 (3.2)	621 (3.4)	644 (3.9)
Qatar	300 (5.3)	329 (5.3)	384 (4.8)	450 (4.1)	515 (4.7)	569 (4.7)	599 (5.1)
Russian Federation	451 (7.7)	479 (4.8)	524 (4.1)	569 (3.1)	613 (4.0)	653 (4.6)	675 (5.2)
Saudi Arabia	223 (7.6)	261 (7.6)	331 (5.2)	403 (3.7)	469 (4.0)	525 (4.5)	558 (3.9)
Serbia	356 (8.1)	395 (7.5)	456 (5.4)	514 (3.3)	566 (3.5)	611 (4.1)	639 (4.4)
Singapore	481 (8.0)	519 (7.0)	578 (4.9)	633 (4.5)	682 (3.8)	720 (3.5)	741 (3.8)
Slovak Republic	368 (10.9)	406 (8.8)	466 (4.6)	517 (3.9)	561 (3.2)	600 (3.8)	626 (5.0)
South Africa (5)	222 (3.6)	251 (3.2)	301 (3.2)	365 (4.1)	439 (5.0)	509 (5.0)	552 (5.4)
Spain	378 (5.7)	405 (4.2)	453 (3.8)	505 (1.9)	554 (2.2)	594 (2.8)	617 (3.7)
Sweden	396 (5.4)	425 (5.2)	474 (4.0)	523 (3.0)	571 (3.4)	615 (4.1)	640 (4.4)
Turkey (5)	346 (8.0)	385 (8.4)	459 (6.0)	531 (4.9)	595 (4.1)	644 (5.0)	671 (5.0)
United Arab Emirates	316 (2.8)	350 (3.0)	412 (2.3)	484 (2.1)	553 (1.9)	607 (1.8)	638 (2.4)
United States	383 (5.9)	421 (4.4)	480 (3.2)	542 (2.8)	594 (3.0)	639 (2.8)	663 (4.0)
Benchmarking Participants							
Ontario, Canada	383 (5.7)	411 (5.3)	458 (4.5)	513 (4.1)	567 (4.2)	612 (4.6)	637 (6.1)
Quebec, Canada	421 (5.3)	445 (3.6)	487 (3.8)	535 (2.6)	578 (3.2)	616 (3.8)	638 (3.6)
Moscow City, Russian Fed.	483 (5.2)	512 (4.9)	554 (2.9)	596 (2.4)	636 (2.9)	669 (2.6)	686 (2.6)
Madrid, Spain	405 (6.5)	432 (3.6)	474 (4.1)	521 (2.7)	565 (2.2)	602 (2.6)	623 (4.2)
Abu Dhabi, UAE	283 (4.9)	314 (3.5)	369 (2.6)	439 (3.1)	510 (2.7)	571 (2.5)	604 (2.8)
Dubai, UAE	400 (4.5)	435 (3.6)	491 (2.7)	549 (1.9)	601 (2.6)	646 (3.3)	671 (4.2)

Percentiles are defined in terms of percentages of students at or below a point on the scale.

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