

APPENDIX D

Percentiles of Achievement

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.

Appendix D.2: Percentiles of Science Achievement

Country	5 th Percentile	10 th Percentile	25 th Percentile	50 th Percentile	75 th Percentile	90 th Percentile	95 th Percentile
Albania	341 (10.5)	378 (7.7)	437 (5.2)	495 (3.7)	549 (3.5)	592 (3.4)	619 (4.7)
Armenia	336 (6.1)	364 (6.2)	415 (4.3)	469 (3.3)	520 (3.6)	564 (4.5)	590 (5.2)
Australia	389 (6.0)	427 (4.4)	484 (2.8)	538 (3.2)	587 (2.4)	629 (3.6)	653 (4.3)
Austria	394 (6.0)	424 (4.2)	474 (3.2)	526 (2.9)	575 (3.5)	614 (2.5)	636 (4.2)
Azerbaijan	260 (10.3)	309 (6.9)	371 (4.0)	434 (3.5)	492 (3.3)	542 (3.3)	569 (4.5)
Bahrain	329 (7.7)	368 (6.3)	432 (4.6)	498 (3.4)	557 (3.9)	606 (4.0)	635 (4.6)
Belgium (Flemish)	384 (3.6)	412 (3.8)	458 (2.8)	504 (2.8)	548 (2.5)	584 (2.7)	605 (3.4)
Bosnia and Herzegovina	321 (7.4)	355 (4.8)	408 (3.7)	463 (3.0)	514 (2.9)	556 (3.6)	580 (4.5)
Bulgaria	326 (14.0)	381 (10.8)	460 (8.1)	536 (5.2)	595 (4.2)	641 (3.4)	666 (3.4)
Canada	401 (3.5)	429 (3.0)	476 (2.8)	526 (2.1)	573 (2.6)	613 (2.6)	637 (2.5)
Chile	343 (5.8)	370 (4.4)	419 (3.7)	470 (4.1)	522 (2.5)	564 (2.9)	589 (3.3)
Chinese Taipei	444 (4.7)	471 (4.4)	516 (2.7)	562 (2.0)	604 (1.9)	639 (2.7)	659 (4.1)
Croatia	424 (5.2)	448 (4.5)	485 (3.3)	525 (3.0)	565 (2.3)	599 (3.4)	618 (4.3)
Cyprus	381 (5.3)	412 (3.7)	463 (3.4)	515 (3.6)	563 (3.2)	606 (4.3)	630 (4.5)
Czech Republic	414 (5.1)	443 (4.3)	490 (3.4)	538 (3.5)	582 (2.2)	619 (3.2)	640 (3.2)
Denmark	405 (6.6)	433 (3.4)	478 (3.1)	525 (2.8)	569 (2.7)	607 (4.0)	629 (3.4)
England	413 (6.8)	444 (4.5)	491 (3.3)	540 (2.7)	587 (3.3)	626 (4.6)	648 (4.8)
Finland	429 (6.9)	464 (4.5)	513 (3.1)	559 (1.9)	602 (2.8)	640 (3.0)	662 (3.3)
France	351 (6.1)	382 (5.0)	435 (4.6)	493 (3.6)	544 (2.9)	583 (3.4)	608 (3.5)
Georgia	307 (10.0)	344 (7.4)	400 (5.0)	459 (4.6)	512 (3.6)	556 (4.1)	582 (5.1)
Germany	383 (4.1)	416 (4.3)	468 (3.4)	524 (3.2)	573 (2.7)	613 (2.4)	634 (4.8)
Hong Kong SAR	408 (6.5)	438 (5.3)	486 (4.0)	535 (3.8)	580 (3.2)	620 (4.0)	643 (4.1)
Hungary	395 (5.6)	425 (5.0)	479 (3.9)	535 (2.8)	584 (3.2)	624 (2.5)	647 (3.2)
Iran, Islamic Rep. of	265 (10.4)	306 (7.0)	377 (6.0)	450 (4.7)	511 (3.9)	561 (3.4)	587 (4.4)
Ireland	393 (7.1)	427 (5.4)	481 (4.8)	534 (3.5)	580 (3.2)	620 (2.8)	643 (4.5)
Italy	400 (5.7)	424 (4.6)	467 (3.1)	512 (3.1)	555 (3.7)	592 (4.1)	615 (7.0)
Japan	442 (4.5)	473 (3.8)	519 (2.7)	566 (1.9)	609 (2.1)	645 (2.7)	668 (3.4)
Kazakhstan	373 (4.5)	397 (3.4)	441 (4.3)	492 (3.2)	544 (4.0)	595 (6.3)	625 (6.4)
Korea, Rep. of	474 (7.0)	504 (4.2)	545 (3.2)	590 (2.3)	633 (2.3)	671 (3.1)	693 (4.1)
Kosovo	260 (8.1)	298 (6.5)	358 (4.4)	419 (4.0)	474 (3.5)	520 (4.2)	545 (4.7)
Kuwait	181 (9.6)	226 (7.5)	307 (7.6)	398 (7.4)	482 (6.9)	548 (8.3)	582 (7.4)
Latvia	432 (6.1)	458 (3.9)	501 (3.5)	546 (2.5)	585 (2.1)	619 (3.1)	639 (4.4)
Lithuania	414 (6.0)	443 (4.3)	492 (3.4)	542 (2.9)	588 (2.2)	628 (3.2)	651 (2.7)
Malta	344 (4.4)	382 (5.3)	443 (2.5)	504 (2.1)	555 (1.8)	598 (2.4)	623 (2.8)
Montenegro	292 (5.4)	336 (5.5)	401 (3.4)	461 (3.4)	516 (2.9)	558 (2.5)	582 (3.4)
Morocco	172 (8.8)	216 (6.8)	291 (6.8)	375 (6.6)	458 (7.2)	531 (9.5)	571 (10.7)
Netherlands	407 (5.4)	434 (4.3)	476 (3.9)	522 (3.3)	564 (2.8)	599 (3.8)	619 (5.7)
New Zealand	360 (4.0)	392 (4.5)	448 (3.2)	507 (2.6)	561 (2.5)	605 (3.4)	629 (3.7)
North Macedonia	244 (9.1)	287 (10.0)	359 (8.1)	432 (8.8)	501 (6.4)	554 (6.7)	583 (5.3)
Northern Ireland	392 (7.0)	424 (4.1)	473 (3.3)	524 (3.0)	568 (2.8)	606 (3.7)	627 (4.7)
Norway (5)	422 (5.8)	451 (4.5)	497 (3.4)	543 (2.6)	586 (2.4)	622 (2.3)	643 (3.5)
Oman	234 (6.3)	278 (4.8)	355 (4.4)	441 (4.0)	518 (4.8)	582 (6.4)	619 (7.7)
Pakistan	83 (13.4)	125 (11.7)	197 (13.6)	288 (19.3)	385 (15.5)	457 (11.8)	496 (11.4)
Philippines	59 (7.2)	93 (8.1)	158 (8.1)	239 (8.1)	333 (9.3)	418 (10.3)	470 (9.3)
Poland	401 (6.6)	435 (4.6)	484 (3.2)	536 (3.3)	582 (3.0)	620 (3.6)	643 (5.1)
Portugal	391 (3.1)	416 (4.2)	459 (3.5)	507 (3.3)	551 (2.7)	587 (2.7)	608 (2.9)
Qatar	271 (7.2)	308 (6.5)	376 (5.0)	456 (5.6)	526 (5.0)	581 (4.3)	611 (5.2)
Russian Federation	457 (7.3)	484 (4.4)	526 (3.5)	570 (3.1)	611 (2.9)	646 (3.1)	666 (4.6)
Saudi Arabia	205 (7.3)	248 (7.6)	327 (5.4)	410 (4.5)	484 (3.2)	540 (3.8)	571 (4.7)
Serbia	368 (11.8)	412 (7.0)	471 (4.3)	525 (3.3)	571 (3.3)	613 (3.7)	637 (3.8)
Singapore	454 (6.3)	493 (5.8)	548 (4.5)	602 (3.7)	649 (3.3)	687 (3.2)	708 (3.7)
Slovak Republic	367 (13.8)	415 (10.0)	479 (4.4)	531 (3.1)	575 (2.6)	612 (3.8)	634 (4.1)
South Africa (5)	129 (4.3)	163 (4.7)	225 (5.0)	311 (6.6)	414 (7.4)	510 (8.7)	563 (7.9)
Spain	394 (4.8)	422 (4.8)	467 (2.8)	516 (2.2)	559 (2.0)	595 (2.8)	614 (2.3)
Sweden	409 (7.2)	439 (5.9)	490 (4.6)	541 (4.2)	588 (3.8)	629 (3.9)	652 (3.8)
Turkey (5)	350 (10.0)	401 (8.9)	475 (5.3)	538 (4.4)	591 (3.6)	631 (3.9)	653 (4.8)
United Arab Emirates	273 (2.5)	314 (2.9)	395 (2.8)	483 (2.6)	557 (2.2)	612 (1.9)	641 (2.1)
United States	387 (5.6)	426 (4.8)	486 (3.6)	546 (3.0)	598 (2.2)	641 (2.5)	664 (2.6)
Benchmarking Participants							
Ontario, Canada	397 (6.3)	426 (4.7)	474 (4.7)	527 (3.8)	577 (3.8)	617 (4.5)	641 (5.3)
Quebec, Canada	413 (5.3)	437 (4.2)	479 (4.4)	524 (3.4)	566 (3.2)	604 (3.8)	627 (4.7)
Moscow City, Russian Fed.	484 (5.8)	514 (4.6)	556 (2.7)	599 (2.2)	638 (2.3)	671 (3.5)	689 (3.8)
Madrid, Spain	417 (4.1)	442 (3.8)	484 (2.8)	526 (2.2)	565 (2.4)	599 (2.7)	618 (4.4)
Abu Dhabi, UAE	230 (4.1)	265 (3.6)	329 (4.0)	419 (3.2)	507 (3.3)	570 (3.7)	604 (3.3)
Dubai, UAE	389 (5.6)	429 (3.5)	492 (2.8)	554 (2.2)	605 (1.9)	646 (2.7)	671 (2.9)

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.

Appendix D.3: 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
Australia	369 (5.3)	401 (4.0)	456 (3.8)	518 (4.2)	578 (5.2)	632 (7.0)	666 (9.0)
Bahrain	317 (3.4)	350 (3.1)	413 (3.3)	488 (2.6)	550 (2.3)	598 (2.2)	628 (3.2)
Chile	318 (4.7)	344 (3.9)	388 (3.7)	440 (4.2)	493 (3.5)	538 (4.7)	568 (7.5)
Chinese Taipei	435 (5.4)	475 (3.9)	550 (4.0)	623 (3.3)	682 (3.6)	731 (3.5)	759 (4.8)
Cyprus	362 (4.7)	392 (4.0)	445 (3.0)	504 (2.6)	559 (2.6)	604 (3.2)	631 (5.0)
Egypt	252 (6.5)	288 (6.9)	347 (6.1)	414 (5.9)	481 (5.5)	535 (6.2)	567 (7.3)
England	363 (9.2)	398 (8.3)	457 (6.9)	516 (5.9)	575 (6.8)	628 (7.6)	660 (10.2)
Finland	384 (6.0)	412 (5.4)	460 (3.6)	512 (2.7)	560 (2.9)	602 (3.1)	624 (2.9)
France	369 (3.2)	393 (3.9)	436 (3.7)	483 (3.3)	531 (2.9)	570 (3.4)	593 (5.1)
Georgia	318 (8.8)	349 (7.4)	400 (6.4)	461 (4.6)	524 (5.5)	576 (6.6)	604 (8.5)
Hong Kong SAR	410 (11.9)	455 (7.8)	524 (5.7)	587 (4.1)	641 (4.1)	686 (7.0)	714 (7.1)
Hungary	366 (6.7)	398 (5.8)	455 (4.4)	518 (4.6)	580 (4.1)	631 (4.7)	661 (7.0)
Iran, Islamic Rep. of	296 (7.2)	329 (5.9)	383 (4.4)	444 (3.3)	509 (5.1)	568 (7.0)	602 (9.5)
Ireland	395 (7.3)	426 (5.8)	476 (3.9)	528 (2.7)	574 (2.5)	614 (3.8)	636 (3.0)
Israel	352 (6.2)	387 (5.1)	450 (4.4)	523 (6.3)	591 (5.2)	647 (6.7)	674 (7.0)
Italy	378 (5.7)	405 (3.4)	448 (3.7)	499 (3.7)	548 (3.2)	589 (4.1)	611 (4.2)
Japan	451 (4.3)	485 (3.9)	538 (2.6)	595 (2.3)	653 (3.5)	700 (5.4)	727 (6.9)
Jordan	274 (7.1)	305 (5.4)	361 (5.4)	423 (4.6)	481 (4.2)	530 (4.6)	558 (4.5)
Kazakhstan	355 (4.2)	381 (4.6)	431 (4.2)	486 (3.7)	544 (4.7)	597 (4.9)	624 (6.0)
Korea, Rep. of	435 (6.2)	475 (5.5)	547 (3.1)	613 (2.7)	674 (4.1)	727 (6.6)	755 (6.0)
Kuwait	262 (6.9)	290 (5.9)	341 (5.4)	400 (5.4)	462 (5.9)	521 (7.6)	552 (8.1)
Lebanon	313 (4.3)	337 (3.6)	378 (2.9)	428 (3.5)	479 (4.0)	525 (4.1)	551 (4.4)
Lithuania	384 (5.2)	415 (3.7)	466 (3.0)	521 (4.0)	577 (3.8)	624 (4.2)	652 (6.3)
Malaysia	319 (4.8)	346 (4.9)	396 (4.7)	457 (3.8)	521 (3.8)	580 (3.3)	618 (4.6)
Morocco	277 (3.7)	300 (3.1)	339 (2.5)	384 (2.4)	433 (2.9)	482 (4.0)	514 (5.2)
New Zealand	333 (7.1)	367 (6.3)	422 (5.1)	482 (3.5)	542 (3.6)	598 (4.0)	629 (4.3)
Norway (9)	370 (6.4)	401 (4.1)	450 (3.3)	505 (3.8)	558 (2.6)	601 (3.4)	626 (3.3)
Oman	246 (5.5)	281 (4.5)	341 (3.6)	412 (3.1)	482 (3.1)	537 (3.3)	568 (3.6)
Portugal	380 (6.3)	406 (5.2)	451 (4.6)	499 (3.9)	551 (3.4)	596 (4.8)	623 (5.6)
Qatar	293 (5.8)	322 (4.6)	374 (4.0)	439 (4.3)	511 (5.8)	571 (8.5)	606 (8.2)
Romania	317 (6.5)	351 (5.2)	410 (5.2)	481 (6.8)	550 (5.2)	604 (5.1)	635 (6.5)
Russian Federation	409 (6.3)	438 (7.3)	488 (6.1)	545 (5.1)	598 (4.6)	647 (6.1)	676 (6.5)
Saudi Arabia	268 (4.6)	294 (4.3)	339 (4.0)	393 (3.8)	446 (2.8)	495 (3.2)	523 (3.4)
Singapore	445 (7.8)	487 (10.4)	565 (7.5)	628 (4.6)	679 (3.1)	718 (2.8)	740 (3.3)
South Africa (9)	274 (3.8)	297 (3.3)	336 (2.3)	383 (2.4)	436 (2.8)	491 (3.6)	527 (4.2)
Sweden	373 (5.5)	401 (4.1)	449 (3.6)	505 (2.8)	556 (3.3)	601 (4.3)	626 (4.3)
Turkey	322 (6.9)	355 (7.8)	418 (4.9)	493 (4.9)	572 (4.7)	637 (5.4)	677 (6.9)
United Arab Emirates	302 (2.5)	336 (2.8)	400 (2.7)	475 (2.5)	548 (2.3)	607 (2.5)	639 (2.8)
United States	348 (9.4)	385 (7.2)	448 (5.8)	518 (5.1)	588 (5.3)	642 (4.8)	671 (4.9)
Benchmarking Participants							
Ontario, Canada	398 (6.1)	427 (5.3)	477 (4.2)	532 (4.4)	582 (4.4)	629 (7.3)	658 (8.0)
Quebec, Canada	429 (8.2)	457 (6.4)	499 (4.6)	545 (4.8)	590 (4.1)	627 (5.3)	648 (5.7)
Moscow City, Russian Fed.	436 (4.9)	466 (5.4)	519 (3.9)	578 (4.6)	634 (4.7)	681 (5.2)	709 (6.8)
Gauteng, RSA (9)	305 (4.3)	328 (4.1)	367 (2.7)	415 (2.8)	469 (4.7)	523 (5.1)	558 (7.3)
Western Cape, RSA (9)	311 (4.2)	336 (4.4)	376 (4.0)	430 (4.6)	498 (7.4)	569 (9.1)	606 (7.8)
Abu Dhabi, UAE	270 (4.5)	300 (4.2)	357 (3.9)	436 (4.1)	512 (3.3)	573 (2.9)	605 (3.9)
Dubai, UAE	371 (6.1)	411 (4.1)	477 (3.1)	545 (2.7)	603 (2.9)	648 (3.0)	673 (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.

SOURCE: IEA's Trends in International Mathematics and Science Study TIMSS 2019
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Appendix D.4: Percentiles of Science Achievement

Country	5 th Percentile	10 th Percentile	25 th Percentile	50 th Percentile	75 th Percentile	90 th Percentile	95 th Percentile
Australia	373 (6.5)	409 (4.6)	473 (4.3)	534 (3.4)	589 (3.8)	635 (4.8)	663 (6.2)
Bahrain	308 (5.6)	346 (3.7)	416 (3.6)	493 (2.5)	561 (2.5)	614 (3.1)	641 (3.5)
Chile	331 (6.3)	360 (4.9)	409 (3.8)	465 (2.7)	517 (3.6)	561 (4.6)	586 (4.2)
Chinese Taipei	426 (5.6)	464 (3.2)	522 (2.2)	581 (2.6)	634 (2.4)	674 (2.4)	698 (3.9)
Cyprus	335 (4.0)	370 (4.4)	429 (4.3)	490 (3.1)	543 (2.5)	587 (3.0)	612 (3.4)
Egypt	192 (10.1)	237 (7.6)	314 (6.6)	398 (5.8)	472 (5.8)	528 (5.6)	558 (5.4)
England	356 (9.3)	393 (8.6)	458 (6.9)	523 (5.0)	580 (4.7)	630 (6.6)	659 (7.9)
Finland	388 (8.8)	428 (6.6)	490 (4.2)	549 (3.1)	602 (2.7)	647 (4.0)	673 (3.8)
France	355 (4.5)	385 (4.7)	436 (3.9)	492 (3.4)	543 (3.7)	585 (3.2)	609 (4.7)
Georgia	302 (7.4)	338 (5.2)	392 (5.4)	450 (3.1)	506 (4.4)	551 (5.4)	577 (8.1)
Hong Kong SAR	337 (7.8)	373 (8.7)	440 (7.6)	510 (6.8)	571 (5.4)	622 (6.2)	651 (7.2)
Hungary	388 (6.4)	421 (5.2)	476 (4.4)	534 (3.6)	586 (3.0)	632 (4.8)	659 (5.2)
Iran, Islamic Rep. of	299 (7.2)	336 (5.0)	391 (4.2)	450 (4.0)	510 (4.2)	563 (7.0)	594 (6.5)
Ireland	376 (8.7)	413 (5.9)	470 (4.2)	529 (3.4)	582 (3.4)	624 (3.1)	649 (5.2)
Israel	343 (9.3)	384 (6.9)	450 (6.0)	521 (5.5)	582 (5.8)	633 (5.5)	661 (6.3)
Italy	373 (6.8)	404 (4.5)	453 (3.7)	503 (3.0)	551 (3.1)	593 (2.7)	619 (4.6)
Japan	444 (3.7)	473 (3.6)	523 (2.1)	573 (2.4)	620 (3.2)	659 (4.0)	681 (4.7)
Jordan	277 (8.9)	319 (7.7)	390 (6.3)	462 (5.6)	522 (4.1)	569 (4.6)	598 (4.4)
Kazakhstan	336 (6.5)	368 (6.5)	422 (4.2)	478 (3.3)	535 (3.8)	590 (5.4)	620 (5.6)
Korea, Rep. of	415 (6.5)	453 (4.1)	509 (3.4)	563 (1.9)	617 (2.9)	666 (3.9)	694 (5.6)
Kuwait	276 (9.7)	313 (7.1)	377 (7.1)	448 (5.9)	515 (6.3)	570 (6.6)	600 (8.3)
Lebanon	213 (7.0)	243 (7.8)	301 (6.7)	374 (5.9)	451 (6.7)	515 (5.2)	550 (6.7)
Lithuania	402 (5.5)	433 (4.9)	483 (4.2)	537 (3.2)	588 (3.6)	630 (4.2)	656 (4.8)
Malaysia	292 (7.6)	330 (7.2)	395 (5.6)	467 (4.1)	529 (3.1)	580 (2.9)	608 (3.4)
Morocco	251 (5.5)	284 (4.4)	337 (3.6)	396 (3.0)	453 (2.9)	503 (3.0)	531 (3.4)
New Zealand	336 (8.1)	375 (6.5)	440 (5.1)	505 (3.5)	563 (3.7)	613 (3.4)	643 (4.2)
Norway (9)	340 (7.1)	378 (7.4)	439 (4.8)	500 (3.3)	558 (4.0)	606 (3.2)	632 (3.5)
Oman	272 (5.3)	313 (5.3)	387 (4.7)	465 (3.6)	534 (2.9)	586 (3.7)	615 (4.2)
Portugal	398 (7.1)	426 (4.5)	470 (4.8)	520 (3.9)	569 (3.6)	610 (3.4)	636 (3.9)
Qatar	301 (7.2)	337 (5.5)	405 (5.0)	478 (5.6)	549 (5.5)	607 (5.1)	637 (6.4)
Romania	313 (6.7)	350 (5.3)	410 (5.5)	472 (4.7)	533 (5.2)	586 (6.9)	618 (6.3)
Russian Federation	415 (7.8)	442 (6.3)	494 (5.3)	546 (4.3)	595 (3.7)	637 (5.4)	661 (4.8)
Saudi Arabia	280 (4.7)	314 (4.3)	371 (3.5)	435 (3.1)	494 (3.0)	544 (2.7)	572 (3.3)
Singapore	439 (12.2)	485 (9.4)	557 (7.4)	621 (4.5)	669 (2.8)	708 (3.2)	731 (2.6)
South Africa (9)	211 (4.5)	243 (4.1)	298 (3.6)	364 (3.6)	435 (4.0)	506 (4.1)	552 (5.0)
Sweden	349 (7.2)	391 (5.5)	462 (5.3)	529 (3.4)	588 (3.9)	638 (5.0)	664 (3.9)
Turkey	351 (7.5)	388 (5.1)	449 (4.5)	519 (4.7)	585 (4.4)	639 (5.0)	669 (5.1)
United Arab Emirates	247 (4.4)	296 (3.4)	388 (3.4)	486 (2.8)	566 (2.4)	627 (2.4)	660 (2.5)
United States	345 (11.0)	388 (8.8)	458 (6.4)	531 (5.4)	594 (4.1)	642 (4.2)	670 (3.9)
Benchmarking Participants							
Ontario, Canada	388 (7.2)	419 (4.6)	470 (4.1)	525 (3.8)	575 (3.7)	621 (5.5)	648 (5.2)
Quebec, Canada	420 (8.0)	447 (6.3)	491 (4.5)	539 (4.1)	585 (4.5)	623 (4.7)	646 (5.2)
Moscow City, Russian Fed.	450 (5.0)	477 (3.7)	521 (3.4)	570 (3.5)	615 (4.1)	653 (3.4)	674 (5.1)
Gauteng, RSA (9)	267 (6.3)	299 (5.1)	353 (4.1)	418 (4.5)	489 (5.1)	554 (6.2)	591 (7.1)
Western Cape, RSA (9)	272 (6.0)	303 (4.8)	360 (4.6)	428 (5.0)	513 (8.2)	596 (10.1)	638 (9.5)
Abu Dhabi, UAE	200 (4.8)	236 (5.5)	313 (6.1)	426 (6.7)	528 (4.1)	595 (3.8)	629 (3.9)
Dubai, UAE	360 (5.4)	408 (4.6)	486 (2.5)	560 (2.2)	619 (2.6)	668 (3.9)	695 (6.0)

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.

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