

Exhibit 1.19: Average Achievement in Mathematics Cognitive Domains by Gender

Country	Knowing (59 Items)		Applying (74 Items)		Reasoning (38 Items)	
	Girls	Boys	Girls	Boys	Girls	Boys
Albania	491 (4.2)	493 (4.3)	497 (3.6)	498 (3.8)	487 (3.9)	493 (4.6)
Armenia	497 (3.1)	497 (3.1)	504 (3.0)	499 (3.6)	483 (3.8)	483 (3.4)
Australia	499 (3.4)	519 (4.0) ▲	513 (2.9)	519 (3.5)	517 (3.2)	528 (3.8) ▲
Austria	534 (2.7)	546 (2.3) ▲	536 (2.9)	540 (2.2)	531 (2.9)	543 (3.2) ▲
Azerbaijan	513 (2.9)	513 (3.0)	523 (3.8)	516 (3.6)	507 (3.4)	505 (3.7)
Bahrain	481 (3.3)	474 (3.6)	482 (3.3)	477 (3.6)	482 (3.7)	476 (3.3)
† Belgium (Flemish)	539 (2.7)	554 (2.9) ▲	523 (2.2)	530 (2.6) ▲	524 (2.2)	537 (2.6) ▲
Bosnia and Herzegovina	441 (2.8)	447 (3.5)	447 (3.2)	457 (3.1) ▲	457 (3.9)	466 (3.2) ▲
Bulgaria	509 (4.8)	513 (4.2)	518 (5.2)	519 (4.6)	505 (5.7)	514 (5.3)
^{1,2} Canada	495 (2.8)	517 (2.3) ▲	505 (2.6)	520 (2.0) ▲	503 (3.0)	523 (2.1) ▲
Chile	420 (3.2)	434 (3.3) ▲	444 (3.6)	447 (3.3)	442 (5.0)	453 (4.3) ▲
Chinese Taipei	619 (2.1)	624 (2.6)	599 (1.9)	601 (2.0)	570 (2.4)	581 (2.9) ▲
Croatia	501 (3.1)	514 (2.5) ▲	504 (2.8)	514 (2.9) ▲	503 (3.6)	516 (3.9) ▲
Cyprus	518 (3.8)	542 (4.2) ▲	530 (3.4)	544 (3.9) ▲	515 (3.0)	539 (3.8) ▲
Czech Republic	520 (3.0)	536 (3.9) ▲	528 (2.8)	535 (3.2) ▲	535 (3.0)	548 (3.6) ▲
† Denmark	517 (3.0)	531 (2.8) ▲	518 (2.9)	522 (2.8)	532 (2.5)	538 (3.0)
² England	555 (4.4)	570 (3.6) ▲	552 (4.1)	555 (3.4)	550 (5.0)	558 (3.3)
Finland	528 (3.1)	534 (3.0)	532 (3.1)	530 (2.8)	533 (3.1)	538 (3.2)
France	477 (3.7)	497 (3.9) ▲	478 (3.6)	485 (3.5)	472 (3.3)	489 (4.2) ▲
¹ Georgia	468 (4.5)	479 (4.4) ▲	488 (4.0)	491 (4.1)	463 (4.5)	475 (5.2) ▲
Germany	515 (3.4)	531 (2.8) ▲	510 (3.0)	518 (2.7) ▲	526 (3.8)	537 (2.7) ▲
† Hong Kong SAR	594 (3.7)	605 (3.6) ▲	604 (4.1)	608 (3.8)	590 (4.3)	601 (5.3) ▲
Hungary	519 (3.1)	530 (2.9) ▲	516 (3.4)	526 (3.2) ▲	513 (3.5)	530 (3.7) ▲
Iran, Islamic Rep. of	433 (6.6)	440 (5.4)	447 (6.7)	452 (5.5)	421 (6.5)	432 (5.8)
Ireland	546 (4.1)	554 (3.4)	548 (3.4)	554 (3.0)	538 (3.4)	546 (3.3)
Italy	508 (3.3)	522 (3.7) ▲	511 (2.9)	523 (3.3) ▲	494 (3.5)	514 (3.5) ▲
Japan	597 (2.4)	598 (2.6)	594 (2.8)	591 (2.0)	588 (3.0)	590 (2.5)
² Kazakhstan	508 (3.1)	511 (3.0)	515 (3.5)	513 (3.1)	507 (3.1)	508 (3.4)
Korea, Rep. of	608 (4.8)	616 (4.3)	594 (2.7)	595 (2.9)	591 (3.1)	601 (3.5) ▲
² Kosovo	440 (3.8)	449 (3.8) ▲	443 (3.6)	448 (3.6)	441 (4.2)	441 (3.5)
Kuwait	- -	- -	- -	- -	- -	- -
² Latvia	533 (2.9)	541 (3.1) ▲	546 (3.0)	547 (3.2)	550 (3.8)	559 (3.4) ▲
² Lithuania	532 (3.2)	538 (3.6)	546 (3.0)	547 (3.7)	529 (3.5)	538 (4.7)
Malta	504 (2.0)	515 (3.0) ▲	504 (1.8)	511 (2.0) ▲	507 (2.5)	509 (2.4)
Montenegro	443 (3.7)	446 (2.4)	453 (2.7)	455 (2.5)	461 (3.4)	465 (3.0)
Morocco	381 (4.9)	377 (4.6)	387 (4.8)	387 (4.7)	382 (5.3)	378 (5.7)
≡ Netherlands	527 (3.3)	541 (3.7) ▲	533 (2.2)	539 (3.1)	541 (3.6)	550 (3.5) ▲
² New Zealand	469 (4.3)	482 (3.6) ▲	487 (3.7)	488 (3.1)	499 (3.5)	503 (3.5)
North Macedonia	468 (6.5)	472 (5.8)	479 (6.5)	475 (5.2)	470 (6.3)	470 (5.9)
† Northern Ireland	570 (4.0)	579 (4.2)	565 (3.4)	564 (3.7)	556 (3.2)	561 (3.9)
† Norway (5)	535 (2.7)	546 (3.4) ▲	539 (2.8)	540 (3.1)	551 (4.0)	551 (3.9)
Oman	431 (4.4) ▲	417 (5.3)	442 (3.7) ▲	426 (4.2)	431 (3.6) ▲	418 (4.7)
² ♀ Pakistan	338 (17.0)	318 (12.5)	318 (18.0)	297 (13.2)	354 (13.5)	354 (10.6)
² ♀ Philippines	320 (6.6) ▲	285 (6.4)	303 (7.7) ▲	271 (6.6)	289 (7.6) ▲	256 (6.3)
Poland	500 (3.3)	518 (2.9) ▲	521 (3.3)	522 (3.0)	523 (3.5)	531 (3.4)
² Portugal	512 (3.2)	533 (3.7) ▲	520 (3.3)	535 (2.9) ▲	513 (3.3)	525 (3.5) ▲
Qatar	445 (5.7)	450 (3.7)	456 (4.7)	451 (3.8)	438 (5.2)	442 (3.4)
² Russian Federation	550 (3.2)	559 (3.3) ▲	567 (3.7)	574 (3.9) ▲	568 (4.3)	578 (4.1) ▲
² Saudi Arabia	- -	- -	- -	- -	- -	- -
² Serbia	504 (3.5)	505 (4.4)	510 (3.8)	508 (4.3)	501 (5.0)	505 (4.9)
³ Singapore	634 (4.2)	646 (4.4) ▲	623 (4.0)	628 (4.2)	609 (4.2)	619 (4.4) ▲
² Slovak Republic	493 (3.4)	510 (4.0) ▲	504 (3.7)	512 (4.1) ▲	512 (4.3)	531 (4.2) ▲
South Africa (5)	384 (4.0) ▲	361 (3.9)	385 (3.9) ▲	366 (4.1)	380 (4.8) ▲	361 (3.6)
Spain	490 (3.3)	508 (2.8) ▲	498 (2.3)	512 (2.5) ▲	485 (2.5)	507 (2.9) ▲
Sweden	510 (3.3)	521 (3.8) ▲	515 (3.5)	521 (3.2)	532 (3.5)	539 (3.2) ▲
² Turkey (5)	512 (4.5)	517 (5.6)	532 (4.6)	530 (5.9)	503 (4.8)	516 (6.9) ▲
United Arab Emirates	475 (2.5)	484 (2.2) ▲	482 (2.6)	487 (2.3)	469 (2.7)	480 (2.2) ▲
² † United States	528 (3.0)	544 (3.0) ▲	534 (3.0)	541 (2.9) ▲	516 (3.3)	531 (2.8) ▲
International Average	500 (0.6)	507 (0.5) ▲	505 (0.6)	506 (0.5) ▲	500 (0.6)	507 (0.6) ▲
Benchmarking Participants						
² Ontario, Canada	493 (5.6)	514 (3.4) ▲	506 (4.9)	521 (3.3) ▲	505 (5.4)	526 (3.5) ▲
Quebec, Canada	525 (3.1)	545 (3.0) ▲	526 (2.9)	540 (2.7) ▲	514 (3.8)	533 (2.7) ▲
Moscow City, Russian Fed.	572 (2.2)	581 (3.2) ▲	595 (2.8)	602 (2.8) ▲	596 (3.2)	607 (3.9) ▲
Madrid, Spain	505 (4.1)	524 (4.2) ▲	513 (2.6)	528 (3.0) ▲	503 (3.3)	525 (3.4) ▲
Abu Dhabi, UAE	436 (2.9)	442 (3.0)	441 (2.7)	443 (3.1)	431 (3.1)	438 (3.3)
² Dubai, UAE	537 (3.6)	547 (2.1) ▲	544 (3.4)	550 (2.2)	533 (3.5)	543 (2.3) ▲

▲ Average significantly higher than other gender

Numbers of items are based on the TIMSS 2019 fourth grade mathematics eAssessment items included in scaling.

♀ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

See Appendix B.2 for population coverage notes 1, 2, and 3. See Appendix B.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

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

A dash (-) indicates comparable data not available because average achievement could not be accurately estimated.