

**Exhibit 3.12: Achievement in Mathematics Cognitive Domains by Gender**

Country	Knowing		Applying		Reasoning	
	Girls	Boys	Girls	Boys	Girls	Boys
Australia	505 (3.8)	504 (3.4)	500 (3.9)	504 (3.6)	511 (3.8)	513 (3.7)
Bahrain	469 (3.3) ▲	458 (3.1)	453 (2.5) ▲	438 (2.5)	463 (2.8) ▲	442 (3.1)
ψ Botswana (9)	404 (3.3) ▲	382 (3.5)	394 (3.3) ●	376 (3.4)	396 (2.5) ●	381 (2.9)
<sup>1</sup> † Canada	518 (2.4)	523 (2.8) ●	526 (2.1)	531 (2.7) ▲	532 (2.3)	536 (2.9)
ψ Chile	414 (3.9)	430 (4.3) ●	416 (3.7)	436 (4.4) ▲	423 (4.4)	440 (4.2) ●
Chinese Taipei	598 (3.0)	598 (3.5)	601 (2.5)	603 (3.4)	604 (2.9)	601 (3.5)
ψ Egypt	404 (6.1)	394 (5.3)	386 (5.6)	384 (4.4)	386 (5.8) ●	370 (5.4)
England	517 (5.2)	509 (4.8)	520 (5.1)	519 (4.8)	524 (5.2)	521 (5.2)
<sup>1 2</sup> Georgia	457 (4.5)	455 (4.9)	452 (3.8)	456 (4.5)	443 (4.7)	439 (5.3)
Hong Kong SAR	599 (5.2)	601 (6.5)	593 (4.5)	597 (6.0)	587 (5.2)	595 (6.5)
Hungary	508 (4.5)	514 (4.4)	510 (4.4)	522 (4.1) ●	512 (4.5)	518 (4.2)
ψ Iran, Islamic Rep. of	437 (5.2)	434 (8.2)	435 (4.7)	434 (7.4)	438 (5.3)	435 (7.7)
Ireland	526 (2.9)	529 (4.2)	517 (2.7)	524 (4.4)	520 (3.4)	523 (4.3)
<sup>3</sup> Israel	511 (4.4)	511 (5.1)	509 (4.3)	515 (4.8)	509 (4.7)	510 (5.0)
<sup>2</sup> Italy	487 (3.2)	490 (3.1)	492 (3.3)	498 (2.8) ●	496 (3.3)	503 (3.4)
Japan	579 (3.7)	576 (3.3)	592 (3.3)	591 (3.1)	593 (3.6)	588 (3.5)
⌘ Jordan	399 (4.2) ●	382 (5.3)	385 (4.2)	372 (5.3)	393 (4.1) ●	366 (5.7)
Kazakhstan	539 (6.7) ▲	528 (6.7)	528 (5.9)	526 (5.5)	530 (5.8) ●	519 (5.9)
Korea, Rep. of	608 (2.9)	606 (3.6)	605 (2.8)	607 (3.7)	606 (3.3)	609 (3.7)
ψ Kuwait	399 (5.0)	396 (7.3)	391 (4.6)	388 (6.8)	379 (6.3)	369 (7.2)
Lebanon	454 (4.1)	458 (4.8)	437 (4.3)	440 (5.0)	406 (5.1)	405 (5.8)
<sup>2</sup> Lithuania	502 (3.9)	502 (3.3)	518 (3.1)	521 (3.3)	501 (3.5)	502 (3.6)
Malaysia	482 (4.0) ●	462 (4.2)	465 (3.9)	461 (4.0)	454 (3.9)	452 (4.2)
Malta	501 (2.3)	497 (1.9)	494 (2.1)	493 (1.8)	486 (2.5)	483 (2.7)
⌘ Morocco	384 (2.9)	380 (2.8)	385 (2.8)	385 (2.3)	374 (3.3)	374 (3.0)
† New Zealand	487 (3.2)	489 (4.7)	494 (3.1)	492 (4.8)	501 (3.3)	496 (5.0)
Norway (9)	500 (2.7)	501 (2.6)	515 (3.0)	517 (2.5)	515 (3.2)	517 (2.8)
ψ Oman	419 (3.9) ●	385 (4.0)	413 (3.1) ●	389 (3.6)	422 (3.5) ●	385 (4.2)
ψ Qatar	440 (3.2)	440 (5.3)	437 (3.0)	433 (4.6)	441 (3.1) ●	422 (4.7)
Russian Federation	538 (6.2)	548 (5.5) ●	535 (5.2)	546 (4.5) ▲	522 (5.6)	533 (5.0) ●
⌘ Saudi Arabia	361 (5.9)	358 (7.8)	369 (5.5)	358 (6.3)	389 (5.5) ●	358 (6.2)
<sup>2</sup> Singapore	641 (3.8) ●	626 (3.9)	623 (3.5) ●	616 (3.7)	621 (4.4) ●	612 (4.2)
Slovenia	518 (2.8)	518 (2.8)	512 (2.7)	516 (2.5)	515 (3.0)	516 (3.2)
⌘ South Africa (9)	377 (5.9) ●	365 (5.8)	363 (5.5)	361 (4.6)	387 (5.2) ●	379 (4.1)
Sweden	480 (3.4)	489 (3.4) ●	503 (3.1)	510 (3.2) ▲	508 (4.3)	511 (3.8)
Thailand	435 (5.6) ●	415 (6.0)	439 (5.1) ●	423 (5.4)	443 (5.1) ●	426 (5.8)
Turkey	450 (5.2)	444 (5.2)	461 (4.5)	458 (4.7)	477 (5.0) ●	467 (5.1)
United Arab Emirates	482 (3.8)	469 (4.1)	461 (3.7)	453 (4.4)	470 (3.7) ●	452 (4.2)
† United States	529 (3.7)	527 (3.6)	513 (3.4)	516 (3.4)	512 (3.1)	516 (3.4)
<b>International Avg.</b>	<b>483 (0.7) ▲</b>	<b>479 (0.8)</b>	<b>481 (0.6)</b>	<b>480 (0.7)</b>	<b>482 (0.7) ▲</b>	<b>477 (0.7)</b>

**Benchmarking Participants**

<sup>1</sup> ⌘ Buenos Aires, Argentina	392 (5.1)	402 (5.8)	386 (5.4)	398 (5.8) ●	379 (5.7)	385 (6.8)
Ontario, Canada	512 (3.2)	514 (3.4)	521 (3.0)	523 (3.3)	534 (3.5)	535 (3.5)
‡ Quebec, Canada	534 (4.0)	548 (5.7) ●	541 (3.7)	553 (5.4) ●	532 (3.9)	545 (5.8) ●
Norway (8)	475 (2.7)	478 (2.9)	492 (2.9)	492 (2.5)	489 (3.1)	486 (3.3)
Abu Dhabi, UAE	467 (6.4) ●	440 (7.8)	445 (6.5) ●	422 (7.8)	456 (6.3) ●	425 (7.6)
Dubai, UAE	520 (4.1)	523 (4.4)	502 (4.0)	509 (4.8)	510 (4.1)	508 (4.8)
<sup>1</sup> Florida, US	501 (8.8)	501 (7.0)	488 (7.6)	489 (7.1)	492 (7.4)	490 (6.7)

▲ Average significantly higher than other gender

⌘ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 25%.

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

See Appendix C.2 for target population coverage notes 1, 2, and 3. See Appendix C.8 for sampling guidelines and sampling participation notes †, ‡, and ‡.

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

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015