

**Exhibit 3.11: Achievement in Mathematics Cognitive Domains by Gender**

Country	Knowing		Applying		Reasoning	
	Girls	Boys	Girls	Boys	Girls	Boys
Australia	503 (3.5)	515 (4.7) ▲	516 (3.5)	526 (3.5) ▲	519 (3.5)	528 (3.8) ▲
<sup>2</sup> Bahrain	460 (1.9) ▲	446 (2.6)	457 (1.8) ▲	443 (2.3)	454 (2.3) ▲	440 (2.6)
<sup>†</sup> Belgium (Flemish)	550 (3.0)	558 (2.4) ▲	542 (2.4)	546 (2.6)	535 (3.3)	537 (3.2)
Bulgaria	529 (5.4)	526 (5.1)	525 (6.1)	521 (5.4)	524 (7.1)	518 (5.6)
<sup>1 2 †</sup> Canada	502 (2.5)	509 (2.8) ▲	506 (2.5)	514 (2.5) ▲	515 (2.5)	527 (2.8) ▲
Chile	450 (3.0)	447 (3.6)	461 (2.7)	464 (3.1)	464 (3.4)	467 (3.0)
Chinese Taipei	619 (2.7)	622 (3.1)	591 (2.4)	595 (2.7)	572 (3.6)	579 (3.3) ▲
Croatia	497 (2.1)	508 (2.7) ▲	493 (2.2)	504 (2.5) ▲	497 (2.9)	517 (3.3) ▲
Cyprus	514 (3.1)	524 (3.3)	526 (3.0)	531 (3.8)	516 (4.2)	522 (3.3)
Czech Republic	514 (3.3)	524 (2.6) ▲	523 (3.0)	533 (2.7) ▲	545 (4.0)	542 (3.2)
<sup>2 †</sup> Denmark	531 (4.4)	541 (3.2) ▲	535 (3.2)	541 (3.1)	545 (4.3)	550 (3.9)
England	548 (3.8)	560 (3.8) ▲	542 (3.9)	547 (3.5)	537 (3.3)	543 (4.2)
Finland	532 (2.9)	528 (2.9)	542 (2.7) ▲	530 (2.4)	547 (3.1) ▲	534 (3.9)
France	482 (3.4)	487 (3.5)	484 (3.5)	492 (3.7) ▲	485 (3.8)	497 (3.8) ▲
<sup>1</sup> Georgia	468 (4.5)	464 (4.6)	462 (4.4)	460 (4.8)	454 (4.8)	450 (5.5)
Germany	522 (2.9)	526 (2.9)	513 (2.6)	517 (2.6)	533 (2.8)	536 (2.9)
<sup>†</sup> Hong Kong SAR	614 (4.8)	621 (3.0)	615 (4.1)	626 (3.3) ▲	595 (4.6)	604 (3.5) ▲
Hungary	530 (3.6)	535 (3.8)	523 (3.4)	529 (4.1)	525 (4.3)	534 (4.3)
Indonesia	401 (4.9) ▲	389 (4.2)	403 (3.8) ▲	392 (3.9)	400 (3.8)	394 (3.9)
Iran, Islamic Rep. of	434 (4.8)	424 (4.6)	440 (4.3)	430 (4.3)	431 (4.5)	422 (5.0)
Ireland	552 (3.6)	556 (3.5)	547 (2.8)	550 (3.0)	532 (3.7)	538 (3.4)
<sup>2</sup> Italy	501 (3.2)	520 (4.0) ▲	494 (2.7)	514 (3.1) ▲	491 (3.0)	513 (4.4) ▲
Japan	602 (2.9)	601 (3.2)	590 (2.2)	588 (2.6)	595 (2.8)	595 (4.0)
Jordan	400 (3.4) ▲	380 (5.0)	398 (3.3) ▲	380 (5.0)	395 (4.0) ▲	376 (5.1)
Kazakhstan	547 (4.7)	544 (5.0)	541 (4.8)	540 (5.4)	555 (5.2)	551 (5.0)
Korea, Rep. of	624 (3.1)	630 (3.3) ▲	592 (2.2)	599 (2.6) ▲	612 (3.8)	624 (3.6) ▲
<sup>ψ</sup> Kuwait	360 (5.5)	349 (5.3)	355 (6.2) ▲	340 (5.4)	340 (5.9) ▲	323 (6.2)
<sup>2</sup> Lithuania	533 (3.2)	532 (3.0)	537 (3.2)	536 (3.3)	537 (3.3)	531 (4.1)
Morocco	378 (3.9)	376 (4.3)	375 (4.0)	374 (3.9)	383 (3.8)	375 (4.5)
<sup>†</sup> Netherlands	515 (2.0)	526 (2.5) ▲	528 (1.8)	533 (2.3) ▲	540 (2.8)	546 (3.6)
New Zealand	471 (3.1)	480 (3.1) ▲	497 (2.8)	497 (3.2)	503 (3.5)	504 (3.5)
<sup>‡</sup> Northern Ireland	577 (5.4)	587 (3.9)	576 (4.3)	575 (3.2)	548 (4.6)	551 (3.5)
Norway (5)	545 (3.0)	543 (4.0)	551 (2.7)	549 (3.3)	559 (3.3)	553 (4.6)
Oman	435 (3.1) ▲	410 (3.2)	436 (3.2) ▲	420 (3.1)	428 (3.2) ▲	411 (3.2)
Poland	515 (2.5)	519 (3.0)	540 (2.3)	543 (2.7)	546 (2.5)	547 (3.0)
<sup>2</sup> Portugal	540 (3.4)	554 (2.7) ▲	534 (2.7)	545 (2.9) ▲	527 (2.9)	536 (3.2) ▲
Qatar	445 (4.1)	444 (4.9)	435 (4.4)	434 (5.2)	433 (5.7)	429 (5.6)
Russian Federation	557 (4.0)	556 (3.8)	566 (3.9)	567 (3.9)	573 (4.2) ▲	567 (4.3)
<sup>ψ</sup> Saudi Arabia	398 (5.5) ▲	351 (7.4)	402 (5.1) ▲	362 (6.8)	406 (5.2) ▲	361 (7.0)
<sup>3</sup> Serbia	513 (3.7)	512 (4.7)	522 (3.8)	520 (4.3)	517 (4.8)	516 (4.8)
<sup>2</sup> Singapore	633 (4.5)	628 (4.1)	621 (4.3)	618 (4.4)	605 (4.9)	600 (4.9)
Slovak Republic	484 (2.8)	497 (2.9) ▲	491 (3.2)	502 (2.9) ▲	509 (3.4)	521 (3.3) ▲
Slovenia	514 (2.8)	520 (2.7)	518 (2.6)	523 (2.6)	522 (2.9)	526 (3.3)
South Africa (5)	387 (3.7) ▲	369 (4.6)	383 (3.6) ▲	371 (4.4)	376 (3.8) ▲	362 (4.5)
<sup>2</sup> Spain	498 (3.1)	512 (2.6) ▲	499 (2.6)	511 (2.6) ▲	496 (3.2)	507 (3.2) ▲
<sup>2</sup> Sweden	498 (3.7)	503 (3.8)	524 (3.0)	519 (3.0)	545 (3.8)	538 (4.3)
Turkey	490 (3.5)	493 (3.8)	481 (3.6)	484 (3.8)	466 (4.0)	467 (3.8)
United Arab Emirates	455 (4.2)	451 (3.8)	454 (4.1)	451 (3.5)	448 (3.9)	442 (3.3)
<sup>2 †</sup> United States	545 (2.5)	550 (2.7) ▲	532 (2.4)	542 (2.8) ▲	528 (2.7)	534 (2.9) ▲
International Avg.	504 (0.5)	505 (0.5)	504 (0.5)	505 (0.5)	504 (0.6)	504 (0.6)

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

▲ Average significantly higher than other gender

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.1 for target population coverage notes 1, 2, and 3. See Appendix C.7 for sampling guidelines and sampling participation notes †, ‡, and §.

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

**Exhibit 3.11: Achievement in Mathematics Cognitive Domains by Gender (Continued)**

Country	Knowing		Applying		Reasoning	
	Girls	Boys	Girls	Boys	Girls	Boys
<b>Benchmarking Participants</b>						
Buenos Aires, Argentina	430 (4.1)	434 (2.7)	424 (3.7)	430 (2.9)	436 (4.1)	438 (3.7)
Ontario, Canada	502 (2.9)	508 (2.9)	510 (2.7)	516 (2.8)	519 (2.9)	529 (3.3)
‡ Quebec, Canada	538 (4.1)	546 (5.3)	528 (4.1)	537 (4.8)	529 (4.9)	544 (5.8)
Norway (4)	478 (3.1)	481 (3.3)	492 (2.8)	498 (3.2)	507 (4.2)	506 (3.7)
<sup>2</sup> ψ Abu Dhabi, UAE	420 (8.3)	416 (7.1)	423 (8.1)	421 (6.5)	418 (7.5)	410 (5.9)
Dubai, UAE	513 (3.6)	515 (3.1)	509 (3.5)	512 (3.3)	508 (3.1)	507 (3.2)
<sup>1</sup> Florida, US	555 (5.4)	556 (6.1)	545 (5.0)	544 (5.7)	539 (6.4)	530 (6.8)

▲ Average significantly higher than other gender

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