

Appendix F

Percentiles and Standard Deviations of Reading Achievement

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Australia	383 (4.5)	418 (3.4)	477 (2.5)	534 (2.8)	583 (2.4)	625 (1.6)	648 (3.1)
Austria	418 (3.5)	444 (3.2)	487 (2.0)	533 (3.1)	573 (1.6)	607 (4.3)	626 (3.7)
Azerbaijan	343 (5.5)	370 (5.2)	419 (5.0)	467 (3.6)	509 (3.0)	546 (3.3)	567 (4.2)
Belgium (French)	391 (7.9)	420 (4.7)	466 (3.9)	509 (2.8)	551 (2.0)	586 (3.7)	606 (3.5)
Bulgaria	382 (9.0)	420 (7.6)	482 (4.8)	541 (4.2)	589 (3.1)	629 (2.7)	652 (3.7)
Canada	429 (4.3)	458 (2.8)	504 (1.7)	551 (1.7)	596 (1.5)	634 (1.4)	658 (3.0)
Chinese Taipei	434 (4.3)	463 (3.7)	512 (3.4)	559 (1.8)	599 (1.6)	633 (3.2)	653 (6.0)
Colombia	315 (10.9)	343 (6.3)	393 (4.9)	449 (3.8)	503 (5.1)	549 (4.8)	575 (6.1)
Croatia	449 (6.3)	474 (3.1)	514 (3.2)	556 (2.2)	594 (2.1)	628 (3.2)	648 (3.7)
Czech Republic	434 (5.4)	463 (3.1)	509 (2.2)	550 (2.1)	587 (2.5)	619 (3.2)	639 (2.7)
Denmark	438 (3.8)	468 (2.9)	514 (2.0)	559 (1.7)	599 (1.6)	632 (1.6)	652 (3.7)
England	404 (8.7)	440 (5.8)	500 (4.0)	558 (3.0)	609 (2.4)	652 (2.9)	678 (4.7)
Finland	458 (3.4)	485 (3.4)	528 (2.5)	571 (3.7)	611 (2.0)	647 (1.9)	668 (2.4)
France	401 (5.5)	429 (4.9)	475 (3.9)	524 (2.2)	568 (1.9)	605 (2.9)	626 (3.9)
Georgia	353 (12.5)	385 (4.8)	438 (2.7)	494 (1.9)	541 (2.4)	580 (3.5)	603 (2.4)
Germany	425 (7.3)	455 (3.3)	499 (3.0)	544 (1.7)	586 (1.8)	623 (2.8)	646 (4.6)
Hong Kong SAR	460 (5.0)	492 (3.9)	534 (3.8)	576 (2.4)	612 (1.6)	643 (1.8)	662 (2.5)
Hungary	397 (10.2)	435 (6.0)	493 (3.1)	545 (2.4)	594 (2.8)	633 (2.7)	656 (3.2)
Indonesia	299 (8.1)	329 (7.4)	380 (4.8)	432 (5.4)	481 (6.4)	522 (3.3)	546 (5.2)
Iran, Islamic Rep. of	306 (3.8)	341 (4.8)	402 (3.8)	464 (5.4)	518 (3.1)	561 (3.1)	586 (2.7)
Ireland	417 (8.2)	452 (5.5)	506 (4.2)	555 (2.4)	603 (1.8)	643 (2.4)	665 (4.2)
Israel	383 (9.0)	425 (8.5)	490 (3.4)	549 (3.6)	600 (2.6)	643 (1.8)	670 (3.6)
Italy	427 (6.8)	456 (4.3)	500 (3.2)	544 (2.5)	586 (2.1)	623 (2.5)	645 (2.1)
Lithuania	412 (3.4)	440 (4.0)	487 (3.3)	532 (2.3)	574 (1.5)	609 (3.4)	630 (2.5)
Malta	303 (4.1)	340 (3.3)	412 (2.9)	487 (2.6)	546 (2.5)	594 (4.0)	620 (3.1)
Morocco	146 (7.6)	178 (4.3)	235 (4.9)	306 (4.5)	384 (4.9)	453 (7.5)	489 (4.8)
Netherlands	454 (3.1)	475 (2.6)	510 (3.5)	548 (2.0)	583 (1.8)	614 (1.4)	631 (2.4)
New Zealand	373 (3.4)	410 (3.5)	474 (3.0)	538 (2.1)	592 (4.5)	639 (3.7)	666 (4.6)
Northern Ireland	422 (6.3)	458 (9.3)	512 (2.1)	564 (2.6)	610 (2.4)	650 (3.7)	673 (3.2)
Norway	398 (4.4)	426 (3.6)	467 (2.9)	510 (3.1)	550 (2.5)	582 (2.7)	601 (3.4)
Oman	224 (6.8)	260 (3.9)	322 (3.5)	393 (3.4)	463 (3.7)	517 (2.7)	548 (4.5)
Poland	397 (5.3)	427 (3.8)	480 (3.1)	531 (2.4)	576 (2.6)	614 (1.8)	637 (4.2)
Portugal	425 (7.5)	454 (3.4)	499 (5.2)	546 (2.9)	586 (3.1)	623 (3.5)	643 (4.2)
Qatar	250 (4.5)	284 (4.5)	348 (3.8)	429 (4.7)	502 (4.6)	558 (4.2)	590 (5.0)
Romania	336 (6.7)	376 (12.1)	445 (8.8)	512 (5.2)	567 (5.3)	610 (4.4)	634 (4.9)
Russian Federation	455 (5.2)	482 (4.3)	526 (2.9)	571 (3.0)	614 (2.4)	649 (2.9)	672 (2.9)
Saudi Arabia	269 (7.8)	304 (9.1)	369 (6.7)	438 (6.2)	496 (2.7)	540 (4.8)	565 (5.3)
Singapore	421 (7.0)	459 (6.1)	519 (4.6)	573 (3.3)	623 (3.9)	665 (4.4)	687 (4.4)
Slovak Republic	408 (11.1)	444 (6.3)	495 (2.8)	541 (2.3)	582 (2.5)	618 (2.9)	638 (3.3)
Slovenia	405 (7.9)	436 (3.7)	487 (2.7)	535 (1.8)	579 (2.2)	616 (1.9)	637 (2.5)
Spain	393 (5.2)	422 (2.9)	469 (3.4)	518 (2.6)	561 (2.5)	597 (2.2)	618 (3.3)
Sweden	426 (3.5)	457 (4.2)	502 (3.2)	545 (3.0)	585 (2.4)	622 (2.2)	643 (3.3)
Trinidad and Tobago	320 (6.6)	352 (5.6)	410 (5.6)	474 (5.7)	534 (3.3)	583 (3.6)	610 (8.1)
United Arab Emirates	272 (4.1)	304 (2.7)	365 (3.4)	440 (2.8)	513 (2.1)	569 (2.5)	600 (3.0)
United States	428 (3.5)	458 (3.3)	510 (2.1)	560 (1.6)	607 (1.2)	648 (2.0)	671 (3.0)

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.
 Note: Percentiles are defined in terms of percentages of students at or below a point on the scale.

SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2011

Appendix F.1: Percentiles of Reading Achievement (Continued)

PIRLS 2011 4th Grade

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Sixth Grade Participants							
Botswana	276 (3.5)	303 (4.4)	353 (3.3)	414 (5.2)	481 (6.0)	544 (9.2)	579 (9.1)
Honduras	315 (4.9)	346 (6.6)	396 (9.0)	452 (5.0)	503 (6.9)	552 (8.6)	578 (8.3)
Kuwait	230 (10.6)	270 (8.9)	340 (11.3)	427 (4.9)	501 (3.4)	555 (6.3)	585 (5.5)
Morocco	274 (8.9)	309 (6.2)	363 (5.2)	426 (5.6)	489 (4.4)	538 (3.8)	564 (3.5)
Benchmarking Participants^o							
Alberta, Canada	423 (6.0)	454 (6.0)	504 (3.6)	552 (3.2)	596 (2.4)	635 (2.8)	658 (2.4)
Ontario, Canada	423 (2.8)	453 (3.3)	506 (2.6)	557 (2.4)	603 (2.7)	641 (3.7)	663 (3.5)
Quebec, Canada	434 (6.9)	459 (5.0)	498 (2.5)	539 (2.4)	579 (1.6)	614 (2.3)	634 (2.2)
Maltese - Malta	303 (4.5)	335 (2.7)	398 (3.5)	465 (2.2)	521 (2.5)	564 (2.5)	589 (4.6)
Eng/Afr (5) - RSA	231 (8.7)	266 (11.2)	334 (9.8)	423 (10.1)	504 (7.6)	572 (5.4)	611 (13.5)
Andalusia, Spain	400 (4.6)	428 (5.4)	472 (3.5)	518 (2.0)	561 (3.0)	597 (2.7)	618 (2.8)
Abu Dhabi, UAE	262 (5.4)	293 (4.2)	353 (7.2)	426 (6.4)	496 (5.0)	550 (7.1)	580 (7.4)
Dubai, UAE	294 (4.4)	330 (2.7)	402 (3.3)	486 (4.0)	553 (2.2)	604 (2.9)	633 (4.7)
Florida, US	447 (12.2)	479 (4.0)	523 (3.5)	570 (2.8)	618 (3.3)	660 (3.7)	685 (5.7)

^o Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2011

prePIRLS 2011 4th Grade

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Botswana	328 (5.0)	355 (2.6)	406 (4.3)	461 (3.5)	517 (5.1)	574 (6.4)	611 (8.2)
Colombia	460 (8.0)	489 (6.3)	534 (5.0)	579 (4.8)	622 (3.0)	659 (4.7)	680 (5.4)
South Africa	310 (3.8)	336 (3.3)	389 (4.1)	454 (4.1)	525 (5.7)	596 (7.9)	637 (8.6)

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Australia	527 (2.2)	80 (1.3)	536 (2.7)	78 (1.6)	519 (2.7)	81 (1.8)
Austria	529 (2.0)	63 (1.0)	533 (2.2)	62 (1.2)	525 (2.3)	64 (1.5)
Azerbaijan	462 (3.3)	68 (1.7)	470 (3.6)	67 (1.9)	456 (3.5)	68 (1.8)
Belgium (French)	506 (2.9)	65 (1.6)	509 (3.1)	63 (2.0)	504 (3.1)	66 (1.6)
Bulgaria	532 (4.1)	82 (2.6)	539 (4.5)	82 (3.1)	524 (4.3)	82 (2.9)
Canada	548 (1.6)	69 (0.9)	553 (1.9)	68 (1.4)	542 (2.1)	70 (1.2)
Chinese Taipei	553 (1.9)	67 (1.2)	561 (2.1)	66 (1.7)	546 (2.1)	67 (1.3)
Colombia	448 (4.1)	79 (2.1)	447 (4.6)	78 (2.4)	448 (4.6)	80 (2.5)
Croatia	553 (1.9)	60 (0.9)	560 (2.1)	58 (1.2)	546 (2.2)	62 (1.2)
Czech Republic	545 (2.2)	61 (1.4)	549 (2.5)	60 (1.7)	542 (2.5)	63 (1.9)
Denmark	554 (1.7)	64 (0.9)	560 (1.9)	63 (1.2)	548 (2.1)	65 (1.2)
England	552 (2.6)	82 (1.4)	563 (3.0)	81 (1.9)	540 (3.1)	82 (1.6)
Finland	568 (1.9)	64 (1.0)	578 (2.3)	62 (1.5)	558 (2.2)	63 (1.3)
France	520 (2.6)	68 (1.3)	522 (3.4)	68 (1.8)	518 (2.4)	68 (1.3)
Georgia	488 (3.1)	76 (1.7)	499 (2.7)	73 (1.8)	477 (4.0)	77 (2.1)
Germany	541 (2.2)	66 (1.3)	545 (2.3)	66 (1.9)	537 (2.7)	67 (1.8)
Hong Kong SAR	571 (2.3)	61 (1.3)	579 (2.3)	57 (1.5)	563 (2.5)	62 (1.6)
Hungary	539 (2.9)	78 (2.1)	547 (3.2)	76 (2.3)	532 (3.2)	80 (2.6)
Indonesia	428 (4.2)	75 (2.2)	437 (4.5)	74 (2.1)	419 (4.3)	75 (2.7)
Iran, Islamic Rep. of	457 (2.8)	85 (1.5)	467 (4.3)	84 (2.3)	448 (4.3)	86 (2.0)
Ireland	552 (2.3)	75 (1.4)	559 (2.9)	72 (2.2)	544 (3.0)	76 (2.1)
Israel	541 (2.7)	86 (2.1)	544 (3.1)	82 (2.2)	538 (3.4)	90 (2.8)
Italy	541 (2.2)	66 (1.3)	543 (2.4)	65 (1.3)	540 (2.7)	67 (1.6)
Lithuania	528 (2.0)	66 (1.2)	537 (2.4)	64 (1.9)	520 (2.4)	67 (1.7)
Malta	477 (1.4)	97 (1.1)	486 (1.9)	93 (1.6)	468 (2.0)	99 (1.8)
Morocco	310 (3.9)	105 (2.0)	326 (4.0)	101 (2.4)	296 (4.6)	106 (2.3)
Netherlands	546 (1.9)	54 (0.9)	549 (2.1)	53 (1.0)	543 (2.2)	54 (1.2)
New Zealand	531 (1.9)	88 (1.2)	541 (2.2)	85 (1.4)	521 (2.7)	90 (2.0)
Northern Ireland	558 (2.4)	76 (1.3)	567 (2.5)	74 (1.9)	550 (3.2)	77 (1.6)
Norway	507 (1.9)	61 (0.9)	514 (2.2)	60 (1.1)	500 (2.7)	63 (1.5)
Oman	391 (2.8)	99 (1.5)	411 (3.0)	91 (1.7)	371 (3.4)	102 (1.9)
Poland	526 (2.1)	73 (1.1)	533 (2.5)	71 (1.8)	519 (2.7)	74 (1.3)
Portugal	541 (2.6)	66 (1.4)	548 (3.0)	63 (1.4)	534 (2.8)	68 (2.0)
Qatar	425 (3.5)	105 (2.1)	441 (4.7)	100 (2.7)	411 (4.2)	108 (3.0)
Romania	502 (4.3)	91 (2.5)	510 (4.8)	89 (3.2)	495 (4.3)	91 (2.5)
Russian Federation	568 (2.7)	66 (1.7)	578 (2.8)	64 (1.8)	559 (3.1)	67 (2.0)
Saudi Arabia	430 (4.4)	91 (2.1)	456 (3.1)	74 (2.1)	402 (8.2)	98 (3.5)
Singapore	567 (3.3)	80 (1.8)	576 (3.5)	77 (1.9)	559 (3.6)	83 (2.2)
Slovak Republic	535 (2.8)	69 (1.9)	540 (3.1)	68 (2.4)	530 (2.8)	70 (1.9)
Slovenia	530 (2.0)	70 (0.9)	539 (2.2)	68 (1.4)	523 (2.7)	72 (1.4)
Spain	513 (2.3)	68 (1.2)	516 (2.5)	67 (1.4)	511 (2.8)	69 (1.5)
Sweden	542 (2.1)	65 (1.0)	549 (2.4)	65 (1.6)	535 (2.5)	65 (1.6)
Trinidad and Tobago	471 (3.8)	88 (1.5)	487 (4.5)	85 (2.3)	456 (4.3)	89 (2.0)
United Arab Emirates	439 (2.2)	101 (1.2)	452 (3.0)	94 (1.3)	425 (3.5)	106 (1.6)
United States	556 (1.5)	73 (1.0)	562 (1.9)	72 (1.2)	551 (1.7)	74 (1.1)

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

SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2011

Appendix F.2: Standard Deviations of Reading Achievement (Continued)

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Sixth Grade Participants						
Botswana	419 (4.1)	92 (2.5)	432 (4.2)	87 (2.7)	405 (4.8)	94 (2.7)
Honduras	450 (4.8)	79 (3.0)	455 (5.5)	79 (3.4)	444 (5.0)	80 (3.4)
Kuwait	419 (5.2)	110 (3.3)	443 (6.4)	107 (3.4)	391 (7.3)	107 (3.5)
Morocco	424 (3.9)	88 (2.0)	443 (3.8)	82 (2.7)	408 (4.5)	91 (2.2)
Benchmarking Participants[◊]						
Alberta, Canada	548 (2.9)	71 (1.4)	553 (3.1)	71 (1.8)	543 (3.1)	70 (1.8)
Ontario, Canada	552 (2.6)	73 (1.5)	558 (3.3)	73 (2.2)	546 (2.8)	72 (1.6)
Quebec, Canada	538 (2.1)	62 (1.2)	544 (2.6)	60 (1.6)	531 (2.4)	62 (1.4)
Maltese - Malta	457 (1.5)	88 (1.4)	470 (2.0)	84 (1.7)	445 (2.2)	90 (1.9)
Eng/Afr (5) - RSA	421 (7.3)	117 (4.0)	434 (7.7)	113 (4.4)	408 (8.7)	119 (4.4)
Andalusia, Spain	515 (2.3)	66 (1.2)	519 (2.4)	63 (1.6)	511 (2.8)	68 (1.4)
Abu Dhabi, UAE	424 (4.7)	99 (2.7)	442 (5.5)	92 (3.1)	406 (6.3)	102 (2.9)
Dubai, UAE	476 (2.0)	105 (1.5)	483 (3.9)	100 (1.8)	470 (3.5)	108 (2.0)
Florida, US	569 (2.9)	72 (1.7)	576 (3.4)	70 (2.3)	561 (3.0)	73 (1.6)

[◊] Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2011

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Botswana	463 (3.5)	85 (2.4)	482 (3.7)	80 (2.7)	444 (3.8)	84 (2.9)
Colombia	576 (3.4)	66 (1.9)	578 (3.8)	65 (2.2)	574 (3.7)	67 (2.1)
South Africa	461 (3.7)	99 (2.4)	476 (3.9)	94 (2.5)	446 (4.2)	101 (3.0)

