

Appendix C

PERCENTILES AND STANDARD DEVIATIONS OF MATHEMATICS ACHIEVEMENT

Table C.1

**Percentiles of Achievement in Mathematics
Upper Grade (Fourth Grade*)**

Country	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile
Australia	394 (5.4)	486 (2.9)	546 (2.9)	608 (2.9)	696 (3.5)
Austria	420 (7.2)	508 (5.0)	560 (3.4)	613 (3.5)	687 (5.1)
Canada	394 (4.7)	477 (5.3)	533 (3.7)	588 (3.0)	670 (8.2)
Cyprus	362 (5.9)	440 (5.1)	503 (3.2)	563 (3.7)	645 (3.7)
Czech Republic	427 (4.0)	509 (3.9)	566 (3.2)	626 (2.6)	711 (6.2)
England	366 (2.9)	452 (3.4)	509 (4.3)	569 (4.5)	672 (3.2)
Greece	341 (10.5)	435 (5.6)	492 (4.3)	553 (6.3)	637 (4.6)
Hong Kong	450 (5.3)	536 (4.4)	590 (5.1)	640 (4.0)	710 (7.4)
Hungary	404 (4.0)	488 (3.8)	548 (4.0)	607 (4.7)	695 (5.5)
Iceland	359 (4.4)	424 (3.7)	471 (2.6)	519 (2.7)	595 (10.7)
Iran, Islamic Rep.	320 (4.9)	382 (3.0)	425 (3.4)	472 (3.3)	546 (5.2)
Ireland	401 (10.2)	495 (4.0)	553 (3.9)	610 (4.2)	687 (5.1)
Israel	392 (5.0)	477 (3.3)	531 (6.4)	590 (3.9)	665 (7.0)
Japan	458 (2.6)	545 (3.2)	597 (2.4)	653 (1.6)	726 (1.5)
Korea	489 (6.3)	565 (2.2)	613 (2.3)	661 (2.4)	727 (4.2)
Kuwait	295 (5.9)	356 (2.8)	399 (3.0)	444 (3.3)	513 (4.1)
Latvia (LSS)	392 (8.2)	465 (6.2)	522 (4.0)	582 (8.0)	664 (12.3)
Netherlands	462 (2.7)	528 (4.8)	575 (3.2)	625 (5.2)	690 (5.4)
New Zealand	350 (9.0)	440 (7.5)	500 (4.5)	560 (3.7)	641 (7.1)
Norway	376 (2.8)	454 (4.9)	506 (1.9)	550 (3.3)	623 (2.0)
Portugal	340 (4.4)	424 (4.5)	476 (4.7)	531 (2.9)	605 (3.1)
Scotland	373 (6.6)	460 (5.7)	520 (3.9)	581 (3.7)	667 (5.7)
Singapore	436 (5.9)	561 (6.7)	631 (5.8)	697 (6.6)	788 (7.2)
Slovenia	419 (6.1)	497 (3.4)	552 (4.4)	609 (3.1)	690 (2.5)
Thailand	375 (6.9)	444 (5.2)	492 (6.4)	538 (5.0)	603 (9.7)
United States	398 (3.1)	488 (2.5)	548 (2.9)	603 (3.3)	682 (3.1)

*Fourth grade in most countries; see Table 2 for more information about the grades tested in each country.
() Standard errors appear in parentheses.

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

Table C.2

Percentiles of Achievement in Mathematics Lower Grade (Third Grade*)

Country	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile
Australia	336 (5.4)	422 (4.6)	485 (3.9)	541 (3.8)	636 (4.5)
Austria	357 (4.4)	430 (4.7)	485 (3.3)	538 (4.7)	625 (28.7)
Canada	341 (5.0)	416 (2.4)	472 (4.5)	524 (3.1)	596 (4.2)
Cyprus	305 (6.1)	378 (2.2)	428 (3.2)	483 (2.9)	557 (5.8)
Czech Republic	363 (3.7)	441 (2.7)	496 (2.8)	553 (3.1)	638 (6.2)
England	318 (4.0)	396 (4.9)	455 (2.7)	515 (5.0)	603 (4.1)
Greece	290 (3.0)	371 (4.1)	429 (5.3)	484 (5.3)	574 (9.5)
Hong Kong	403 (4.6)	478 (4.2)	529 (3.3)	573 (4.5)	637 (2.9)
Hungary	330 (5.7)	418 (4.6)	476 (5.0)	537 (5.3)	620 (6.6)
Iceland	301 (2.4)	364 (3.2)	410 (2.4)	454 (2.6)	518 (7.3)
Iran, Islamic Rep.	272 (4.8)	334 (3.9)	377 (2.9)	419 (5.8)	492 (8.6)
Ireland	342 (6.8)	418 (5.5)	477 (4.2)	530 (3.5)	610 (2.2)
Israel	--	--	--	--	--
Japan	410 (3.5)	489 (2.4)	538 (1.1)	590 (2.5)	659 (2.8)
Korea	445 (2.6)	516 (3.0)	564 (2.7)	607 (3.7)	677 (5.0)
Kuwait	--	--	--	--	--
Latvia (LSS)	337 (3.1)	409 (4.4)	459 (5.6)	514 (4.9)	601 (12.1)
Netherlands	387 (7.4)	449 (3.9)	492 (3.8)	536 (4.0)	601 (3.3)
New Zealand	300 (12.3)	388 (4.2)	442 (5.4)	495 (3.7)	573 (3.9)
Norway	303 (3.8)	374 (3.6)	422 (2.4)	469 (3.7)	541 (7.6)
Portugal	280 (5.9)	370 (4.8)	428 (4.8)	481 (4.7)	565 (4.3)
Scotland	328 (3.3)	407 (3.6)	456 (3.0)	510 (4.9)	591 (5.3)
Singapore	378 (3.3)	488 (4.4)	556 (5.3)	620 (6.4)	709 (8.0)
Slovenia	362 (2.6)	434 (4.6)	485 (3.0)	541 (3.6)	616 (3.8)
Thailand	328 (4.2)	395 (3.9)	445 (4.5)	494 (6.4)	561 (6.3)
United States	346 (5.0)	423 (3.9)	479 (2.7)	536 (3.9)	616 (12.3)

*Third grade in most countries; see Table 2 for more information about the grades tested in each country.

A dash (-) indicates data are not available. Israel and Kuwait did not test the lower grade.

() Standard errors appear in parentheses.

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

Table C.3

**Standard Deviations of Achievement in Mathematics
Upper Grade (Fourth Grade*)**

Country	Overall		Boys		Girls	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Australia	546 (3.1)	92 (1.7)	547 (3.5)	93 (1.9)	545 (3.7)	91 (1.9)
Austria	559 (3.1)	79 (1.3)	563 (3.6)	79 (1.7)	555 (3.6)	79 (1.5)
Canada	532 (3.3)	84 (1.7)	534 (3.4)	86 (1.9)	531 (3.9)	82 (2.1)
Cyprus	502 (3.1)	86 (1.5)	506 (3.5)	89 (2.0)	499 (3.3)	83 (1.9)
Czech Republic	567 (3.3)	86 (1.7)	568 (3.4)	86 (2.1)	566 (3.6)	86 (2.1)
England	513 (3.2)	91 (2.0)	515 (3.4)	93 (1.9)	510 (4.4)	90 (3.2)
Greece	492 (4.4)	90 (3.0)	491 (5.0)	91 (3.5)	493 (4.5)	88 (3.0)
Hong Kong	587 (4.3)	79 (1.8)	586 (4.7)	81 (2.4)	587 (4.2)	76 (1.6)
Hungary	548 (3.7)	88 (1.7)	552 (4.2)	90 (2.1)	546 (3.9)	85 (2.2)
Iceland	474 (2.7)	72 (1.5)	474 (3.3)	72 (1.8)	473 (3.0)	72 (2.0)
Iran, Islamic Rep.	429 (4.0)	69 (2.1)	433 (6.0)	72 (3.3)	424 (5.0)	66 (2.3)
Ireland	550 (3.4)	85 (1.6)	548 (3.9)	88 (1.9)	551 (4.3)	83 (2.0)
Israel	531 (3.5)	85 (1.8)	537 (4.4)	82 (2.2)	528 (4.1)	86 (2.3)
Japan	597 (2.1)	81 (0.9)	601 (2.5)	85 (1.4)	593 (2.2)	77 (1.1)
Korea	611 (2.1)	74 (1.3)	618 (2.5)	75 (1.9)	603 (2.6)	72 (1.7)
Kuwait	400 (2.8)	67 (1.2)	399 (4.6)	72 (1.9)	402 (2.5)	61 (1.6)
Latvia (LSS)	525 (4.8)	85 (3.4)	521 (5.5)	87 (4.4)	530 (5.2)	82 (3.1)
Netherlands	577 (3.4)	71 (1.6)	585 (3.8)	71 (2.0)	569 (3.4)	69 (1.6)
New Zealand	499 (4.3)	90 (2.5)	494 (5.7)	95 (3.4)	504 (4.3)	83 (2.3)
Norway	502 (3.0)	74 (1.5)	504 (3.5)	76 (2.0)	499 (3.6)	71 (1.7)
Portugal	475 (3.5)	80 (1.7)	478 (3.8)	81 (1.9)	473 (3.7)	79 (2.1)
Scotland	520 (3.9)	89 (1.9)	520 (4.3)	92 (2.4)	520 (3.8)	86 (2.1)
Singapore	625 (5.3)	104 (2.3)	620 (5.5)	107 (2.4)	630 (6.4)	101 (2.9)
Slovenia	552 (3.2)	82 (1.7)	551 (3.4)	83 (1.9)	554 (4.0)	82 (2.4)
Thailand	490 (4.7)	70 (2.0)	485 (5.8)	70 (2.5)	496 (4.2)	69 (2.1)
United States	545 (3.0)	85 (1.4)	545 (3.1)	86 (1.4)	544 (3.3)	84 (1.8)

*Fourth grade in most countries; see Table 2 for more information about the grades tested in each country.
() Standard errors appear in parentheses.

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

Table C.4

Standard Deviations of Achievement in Mathematics Lower Grade (Third Grade*)

Country	Overall		Boys		Girls	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Australia	483 (4.0)	90 (1.7)	487 (4.5)	91 (2.3)	480 (4.4)	89 (2.1)
Austria	487 (5.3)	83 (5.5)	494 (9.2)	90 (8.4)	481 (3.8)	75 (2.0)
Canada	469 (2.7)	78 (1.4)	477 (3.2)	80 (1.8)	463 (3.0)	76 (1.3)
Cyprus	430 (2.8)	77 (1.6)	433 (3.3)	81 (2.0)	428 (3.1)	73 (1.9)
Czech Republic	497 (3.3)	83 (1.9)	502 (3.7)	84 (2.2)	493 (3.8)	81 (2.1)
England	456 (3.0)	87 (1.7)	461 (3.5)	90 (1.8)	452 (3.4)	84 (2.2)
Greece	428 (4.0)	85 (2.1)	432 (4.4)	85 (2.6)	424 (4.2)	85 (2.3)
Hong Kong	524 (3.0)	72 (1.6)	528 (3.2)	75 (1.8)	518 (3.5)	69 (2.0)
Hungary	476 (4.2)	89 (2.0)	479 (4.9)	91 (2.7)	476 (4.4)	87 (2.1)
Iceland	410 (2.8)	67 (1.5)	418 (3.5)	72 (2.4)	403 (3.0)	62 (1.5)
Iran, Islamic Rep.	378 (3.5)	66 (2.1)	384 (4.4)	67 (2.3)	373 (4.9)	64 (3.2)
Ireland	476 (3.6)	81 (1.7)	473 (4.3)	84 (1.9)	479 (4.5)	78 (2.3)
Israel	- -	- -	- -	- -	- -	- -
Japan	538 (1.5)	75 (1.1)	539 (2.0)	77 (1.5)	536 (1.7)	73 (1.3)
Korea	561 (2.3)	70 (1.0)	567 (2.8)	71 (1.5)	554 (2.5)	68 (1.2)
Kuwait	- -	- -	- -	- -	- -	- -
Latvia (LSS)	463 (4.3)	81 (3.9)	462 (5.3)	82 (4.7)	464 (4.5)	80 (3.8)
Netherlands	493 (2.7)	65 (1.4)	497 (2.9)	65 (1.5)	489 (3.2)	64 (2.0)
New Zealand	440 (4.0)	82 (2.5)	436 (4.4)	83 (2.3)	443 (4.5)	81 (3.5)
Norway	421 (3.1)	72 (1.4)	430 (3.5)	71 (1.8)	411 (3.8)	71 (1.9)
Portugal	425 (3.8)	85 (2.1)	430 (3.5)	85 (2.3)	420 (5.0)	85 (3.6)
Scotland	458 (3.4)	80 (2.0)	462 (3.8)	81 (2.4)	454 (3.5)	78 (2.3)
Singapore	552 (4.8)	100 (2.2)	551 (5.4)	104 (2.5)	553 (5.0)	96 (2.4)
Slovenia	488 (2.9)	77 (1.6)	492 (3.1)	79 (1.6)	483 (3.5)	75 (2.3)
Thailand	444 (5.1)	71 (2.5)	440 (5.0)	71 (2.7)	448 (5.6)	71 (2.8)
United States	480 (3.4)	82 (2.2)	480 (3.1)	82 (2.3)	479 (4.4)	82 (2.4)

*Third grade in most countries; see Table 2 for more information about the grades tested in each country. A dash (-) indicates data are not available. Israel and Kuwait did not test the lower grade. () Standard errors appear in parentheses.

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