

Height-for-age GIRLS

5 to 19 years (z-scores)



| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 5: 1 | 61 | 1 | 109.6016 | 0.04355 | 4.7731 | 95.3 | 100.1 | 104.8 | 109.6 | 114.4 | 119.1 | 123.9 |
| 5: 2 | 62 | 1 | 110.1258 | 0.04364 | 4.8059 | 95.7 | 100.5 | 105.3 | 110.1 | 114.9 | 119.7 | 124.5 |
| 5: 3 | 63 | 1 | 110.6451 | 0.04373 | 4.8385 | 96.1 | 101.0 | 105.8 | 110.6 | 115.5 | 120.3 | 125.2 |
| 5: 4 | 64 | 1 | 111.1596 | 0.04382 | 4.8710 | 96.5 | 101.4 | 106.3 | 111.2 | 116.0 | 120.9 | 125.8 |
| 5: 5 | 65 | 1 | 111.6696 | 0.04390 | 4.9023 | 97.0 | 101.9 | 106.8 | 111.7 | 116.6 | 121.5 | 126.4 |
| 5: 6 | 66 | 1 | 112.1753 | 0.04399 | 4.9346 | 97.4 | 102.3 | 107.2 | 112.2 | 117.1 | 122.0 | 127.0 |
| 5: 7 | 67 | 1 | 112.6767 | 0.04407 | 4.9657 | 97.8 | 102.7 | 107.7 | 112.7 | 117.6 | 122.6 | 127.6 |
| 5: 8 | 68 | 1 | 113.1740 | 0.04415 | 4.9966 | 98.2 | 103.2 | 108.2 | 113.2 | 118.2 | 123.2 | 128.2 |
| 5: 9 | 69 | 1 | 113.6672 | 0.04423 | 5.0275 | 98.6 | 103.6 | 108.6 | 113.7 | 118.7 | 123.7 | 128.8 |
| 5:10 | 70 | 1 | 114.1565 | 0.04431 | 5.0583 | 99.0 | 104.0 | 109.1 | 114.2 | 119.2 | 124.3 | 129.3 |
| 5:11 | 71 | 1 | 114.6421 | 0.04439 | 5.0890 | 99.4 | 104.5 | 109.6 | 114.6 | 119.7 | 124.8 | 129.9 |
| 6: 0 | 72 | 1 | 115.1244 | 0.04447 | 5.1196 | 99.8 | 104.9 | 110.0 | 115.1 | 120.2 | 125.4 | 130.5 |
| 6: 1 | 73 | 1 | 115.6039 | 0.04454 | 5.1490 | 100.2 | 105.3 | 110.5 | 115.6 | 120.8 | 125.9 | 131.1 |
| 6: 2 | 74 | 1 | 116.0812 | 0.04461 | 5.1784 | 100.5 | 105.7 | 110.9 | 116.1 | 121.3 | 126.4 | 131.6 |
| 6: 3 | 75 | 1 | 116.5568 | 0.04469 | 5.2089 | 100.9 | 106.1 | 111.3 | 116.6 | 121.8 | 127.0 | 132.2 |
| 6: 4 | 76 | 1 | 117.0311 | 0.04475 | 5.2371 | 101.3 | 106.6 | 111.8 | 117.0 | 122.3 | 127.5 | 132.7 |
| 6: 5 | 77 | 1 | 117.5044 | 0.04482 | 5.2665 | 101.7 | 107.0 | 112.2 | 117.5 | 122.8 | 128.0 | 133.3 |
| 6: 6 | 78 | 1 | 117.9769 | 0.04489 | 5.2960 | 102.1 | 107.4 | 112.7 | 118.0 | 123.3 | 128.6 | 133.9 |
| 6: 7 | 79 | 1 | 118.4489 | 0.04495 | 5.3243 | 102.5 | 107.8 | 113.1 | 118.4 | 123.8 | 129.1 | 134.4 |
| 6: 8 | 80 | 1 | 118.9208 | 0.04502 | 5.3538 | 102.9 | 108.2 | 113.6 | 118.9 | 124.3 | 129.6 | 135.0 |
| 6: 9 | 81 | 1 | 119.3926 | 0.04508 | 5.3822 | 103.2 | 108.6 | 114.0 | 119.4 | 124.8 | 130.2 | 135.5 |
| 6:10 | 82 | 1 | 119.8648 | 0.04514 | 5.4107 | 103.6 | 109.0 | 114.5 | 119.9 | 125.3 | 130.7 | 136.1 |
| 6:11 | 83 | 1 | 120.3374 | 0.04520 | 5.4393 | 104.0 | 109.5 | 114.9 | 120.3 | 125.8 | 131.2 | 136.7 |
| 7: 0 | 84 | 1 | 120.8105 | 0.04525 | 5.4667 | 104.4 | 109.9 | 115.3 | 120.8 | 126.3 | 131.7 | 137.2 |
| 7: 1 | 85 | 1 | 121.2843 | 0.04531 | 5.4954 | 104.8 | 110.3 | 115.8 | 121.3 | 126.8 | 132.3 | 137.8 |
| 7: 2 | 86 | 1 | 121.7587 | 0.04536 | 5.5230 | 105.2 | 110.7 | 116.2 | 121.8 | 127.3 | 132.8 | 138.3 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)



| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 7: 3 | 87 | 1 | 122.2338 | 0.04542 | 5.5519 | 105.6 | 111.1 | 116.7 | 122.2 | 127.8 | 133.3 | 138.9 |
| 7: 4 | 88 | 1 | 122.7098 | 0.04547 | 5.5796 | 106.0 | 111.6 | 117.1 | 122.7 | 128.3 | 133.9 | 139.4 |
| 7: 5 | 89 | 1 | 123.1868 | 0.04551 | 5.6062 | 106.4 | 112.0 | 117.6 | 123.2 | 128.8 | 134.4 | 140.0 |
| 7: 6 | 90 | 1 | 123.6646 | 0.04556 | 5.6342 | 106.8 | 112.4 | 118.0 | 123.7 | 129.3 | 134.9 | 140.6 |
| 7: 7 | 91 | 1 | 124.1435 | 0.04561 | 5.6622 | 107.2 | 112.8 | 118.5 | 124.1 | 129.8 | 135.5 | 141.1 |
| 7: 8 | 92 | 1 | 124.6234 | 0.04565 | 5.6891 | 107.6 | 113.2 | 118.9 | 124.6 | 130.3 | 136.0 | 141.7 |
| 7: 9 | 93 | 1 | 125.1045 | 0.04569 | 5.7160 | 108.0 | 113.7 | 119.4 | 125.1 | 130.8 | 136.5 | 142.3 |
| 7:10 | 94 | 1 | 125.5869 | 0.04573 | 5.7431 | 108.4 | 114.1 | 119.8 | 125.6 | 131.3 | 137.1 | 142.8 |
| 7:11 | 95 | 1 | 126.0706 | 0.04577 | 5.7703 | 108.8 | 114.5 | 120.3 | 126.1 | 131.8 | 137.6 | 143.4 |
| 8: 0 | 96 | 1 | 126.5558 | 0.04581 | 5.7975 | 109.2 | 115.0 | 120.8 | 126.6 | 132.4 | 138.2 | 143.9 |
| 8: 1 | 97 | 1 | 127.0424 | 0.04585 | 5.8249 | 109.6 | 115.4 | 121.2 | 127.0 | 132.9 | 138.7 | 144.5 |
| 8: 2 | 98 | 1 | 127.5304 | 0.04588 | 5.8511 | 110.0 | 115.8 | 121.7 | 127.5 | 133.4 | 139.2 | 145.1 |
| 8: 3 | 99 | 1 | 128.0199 | 0.04591 | 5.8774 | 110.4 | 116.3 | 122.1 | 128.0 | 133.9 | 139.8 | 145.7 |
| 8: 4 | 100 | 1 | 128.5109 | 0.04594 | 5.9038 | 110.8 | 116.7 | 122.6 | 128.5 | 134.4 | 140.3 | 146.2 |
| 8: 5 | 101 | 1 | 129.0035 | 0.04597 | 5.9303 | 111.2 | 117.1 | 123.1 | 129.0 | 134.9 | 140.9 | 146.8 |
| 8: 6 | 102 | 1 | 129.4975 | 0.04600 | 5.9569 | 111.6 | 117.6 | 123.5 | 129.5 | 135.5 | 141.4 | 147.4 |
| 8: 7 | 103 | 1 | 129.9932 | 0.04602 | 5.9823 | 112.0 | 118.0 | 124.0 | 130.0 | 136.0 | 142.0 | 147.9 |
| 8: 8 | 104 | 1 | 130.4904 | 0.04604 | 6.0078 | 112.5 | 118.5 | 124.5 | 130.5 | 136.5 | 142.5 | 148.5 |
| 8: 9 | 105 | 1 | 130.9891 | 0.04607 | 6.0347 | 112.9 | 118.9 | 125.0 | 131.0 | 137.0 | 143.1 | 149.1 |
| 8:10 | 106 | 1 | 131.4895 | 0.04608 | 6.0590 | 113.3 | 119.4 | 125.4 | 131.5 | 137.5 | 143.6 | 149.7 |
| 8:11 | 107 | 1 | 131.9912 | 0.04610 | 6.0848 | 113.7 | 119.8 | 125.9 | 132.0 | 138.1 | 144.2 | 150.2 |
| 9: 0 | 108 | 1 | 132.4944 | 0.04612 | 6.1106 | 114.2 | 120.3 | 126.4 | 132.5 | 138.6 | 144.7 | 150.8 |
| 9: 1 | 109 | 1 | 132.9989 | 0.04613 | 6.1352 | 114.6 | 120.7 | 126.9 | 133.0 | 139.1 | 145.3 | 151.4 |
| 9: 2 | 110 | 1 | 133.5046 | 0.04614 | 6.1599 | 115.0 | 121.2 | 127.3 | 133.5 | 139.7 | 145.8 | 152.0 |
| 9: 3 | 111 | 1 | 134.0118 | 0.04615 | 6.1846 | 115.5 | 121.6 | 127.8 | 134.0 | 140.2 | 146.4 | 152.6 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)

| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 9: 4 | 112 | 1 | 134.5202 | 0.04616 | 6.2095 | 115.9 | 122.1 | 128.3 | 134.5 | 140.7 | 146.9 | 153.1 |
| 9: 5 | 113 | 1 | 135.0299 | 0.04616 | 6.2330 | 116.3 | 122.6 | 128.8 | 135.0 | 141.3 | 147.5 | 153.7 |
| 9: 6 | 114 | 1 | 135.5410 | 0.04617 | 6.2579 | 116.8 | 123.0 | 129.3 | 135.5 | 141.8 | 148.1 | 154.3 |
| 9: 7 | 115 | 1 | 136.0533 | 0.04617 | 6.2816 | 117.2 | 123.5 | 129.8 | 136.1 | 142.3 | 148.6 | 154.9 |
| 9: 8 | 116 | 1 | 136.5670 | 0.04616 | 6.3039 | 117.7 | 124.0 | 130.3 | 136.6 | 142.9 | 149.2 | 155.5 |
| 9: 9 | 117 | 1 | 137.0821 | 0.04616 | 6.3277 | 118.1 | 124.4 | 130.8 | 137.1 | 143.4 | 149.7 | 156.1 |
| 9:10 | 118 | 1 | 137.5987 | 0.04616 | 6.3516 | 118.5 | 124.9 | 131.2 | 137.6 | 144.0 | 150.3 | 156.7 |
| 9:11 | 119 | 1 | 138.1167 | 0.04615 | 6.3741 | 119.0 | 125.4 | 131.7 | 138.1 | 144.5 | 150.9 | 157.2 |
| 10: 0 | 120 | 1 | 138.6363 | 0.04614 | 6.3967 | 119.4 | 125.8 | 132.2 | 138.6 | 145.0 | 151.4 | 157.8 |
| 10: 1 | 121 | 1 | 139.1575 | 0.04612 | 6.4179 | 119.9 | 126.3 | 132.7 | 139.2 | 145.6 | 152.0 | 158.4 |
| 10: 2 | 122 | 1 | 139.6803 | 0.04611 | 6.4407 | 120.4 | 126.8 | 133.2 | 139.7 | 146.1 | 152.6 | 159.0 |
| 10: 3 | 123 | 1 | 140.2049 | 0.04609 | 6.4620 | 120.8 | 127.3 | 133.7 | 140.2 | 146.7 | 153.1 | 159.6 |
| 10: 4 | 124 | 1 | 140.7313 | 0.04607 | 6.4835 | 121.3 | 127.8 | 134.2 | 140.7 | 147.2 | 153.7 | 160.2 |
| 10: 5 | 125 | 1 | 141.2594 | 0.04605 | 6.5050 | 121.7 | 128.2 | 134.8 | 141.3 | 147.8 | 154.3 | 160.8 |
| 10: 6 | 126 | 1 | 141.7892 | 0.04603 | 6.5266 | 122.2 | 128.7 | 135.3 | 141.8 | 148.3 | 154.8 | 161.4 |
| 10: 7 | 127 | 1 | 142.3206 | 0.04600 | 6.5467 | 122.7 | 129.2 | 135.8 | 142.3 | 148.9 | 155.4 | 162.0 |
| 10: 8 | 128 | 1 | 142.8534 | 0.04597 | 6.5670 | 123.2 | 129.7 | 136.3 | 142.9 | 149.4 | 156.0 | 162.6 |
| 10: 9 | 129 | 1 | 143.3874 | 0.04594 | 6.5872 | 123.6 | 130.2 | 136.8 | 143.4 | 150.0 | 156.6 | 163.1 |
| 10:10 | 130 | 1 | 143.9222 | 0.04591 | 6.6075 | 124.1 | 130.7 | 137.3 | 143.9 | 150.5 | 157.1 | 163.7 |
| 10:11 | 131 | 1 | 144.4575 | 0.04588 | 6.6277 | 124.6 | 131.2 | 137.8 | 144.5 | 151.1 | 157.7 | 164.3 |
| 11: 0 | 132 | 1 | 144.9929 | 0.04584 | 6.6465 | 125.1 | 131.7 | 138.3 | 145.0 | 151.6 | 158.3 | 164.9 |
| 11: 1 | 133 | 1 | 145.5280 | 0.04580 | 6.6652 | 125.5 | 132.2 | 138.9 | 145.5 | 152.2 | 158.9 | 165.5 |
| 11: 2 | 134 | 1 | 146.0622 | 0.04576 | 6.6838 | 126.0 | 132.7 | 139.4 | 146.1 | 152.7 | 159.4 | 166.1 |
| 11: 3 | 135 | 1 | 146.5951 | 0.04571 | 6.7009 | 126.5 | 133.2 | 139.9 | 146.6 | 153.3 | 160.0 | 166.7 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)

| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 11: 4 | 136 | 1 | 147.1262 | 0.04567 | 6.7193 | 127.0 | 133.7 | 140.4 | 147.1 | 153.8 | 160.6 | 167.3 |
| 11: 5 | 137 | 1 | 147.6548 | 0.04562 | 6.7360 | 127.4 | 134.2 | 140.9 | 147.7 | 154.4 | 161.1 | 167.9 |
| 11: 6 | 138 | 1 | 148.1804 | 0.04557 | 6.7526 | 127.9 | 134.7 | 141.4 | 148.2 | 154.9 | 161.7 | 168.4 |
| 11: 7 | 139 | 1 | 148.7023 | 0.04552 | 6.7689 | 128.4 | 135.2 | 141.9 | 148.7 | 155.5 | 162.2 | 169.0 |
| 11: 8 | 140 | 1 | 149.2197 | 0.04546 | 6.7835 | 128.9 | 135.7 | 142.4 | 149.2 | 156.0 | 162.8 | 169.6 |
| 11: 9 | 141 | 1 | 149.7322 | 0.04541 | 6.7993 | 129.3 | 136.1 | 142.9 | 149.7 | 156.5 | 163.3 | 170.1 |
| 11:10 | 142 | 1 | 150.2390 | 0.04535 | 6.8133 | 129.8 | 136.6 | 143.4 | 150.2 | 157.1 | 163.9 | 170.7 |
| 11:11 | 143 | 1 | 150.7394 | 0.04529 | 6.8270 | 130.3 | 137.1 | 143.9 | 150.7 | 157.6 | 164.4 | 171.2 |
| 12: 0 | 144 | 1 | 151.2327 | 0.04523 | 6.8403 | 130.7 | 137.6 | 144.4 | 151.2 | 158.1 | 164.9 | 171.8 |
| 12: 1 | 145 | 1 | 151.7182 | 0.04516 | 6.8516 | 131.2 | 138.0 | 144.9 | 151.7 | 158.6 | 165.4 | 172.3 |
| 12: 2 | 146 | 1 | 152.1951 | 0.04510 | 6.8640 | 131.6 | 138.5 | 145.3 | 152.2 | 159.1 | 165.9 | 172.8 |
| 12: 3 | 147 | 1 | 152.6628 | 0.04503 | 6.8744 | 132.0 | 138.9 | 145.8 | 152.7 | 159.5 | 166.4 | 173.3 |
| 12: 4 | 148 | 1 | 153.1206 | 0.04497 | 6.8858 | 132.5 | 139.3 | 146.2 | 153.1 | 160.0 | 166.9 | 173.8 |
| 12: 5 | 149 | 1 | 153.5678 | 0.04490 | 6.8952 | 132.9 | 139.8 | 146.7 | 153.6 | 160.5 | 167.4 | 174.3 |
| 12: 6 | 150 | 1 | 154.0041 | 0.04483 | 6.9040 | 133.3 | 140.2 | 147.1 | 154.0 | 160.9 | 167.8 | 174.7 |
| 12: 7 | 151 | 1 | 154.4290 | 0.04476 | 6.9122 | 133.7 | 140.6 | 147.5 | 154.4 | 161.3 | 168.3 | 175.2 |
| 12: 8 | 152 | 1 | 154.8423 | 0.04468 | 6.9184 | 134.1 | 141.0 | 147.9 | 154.8 | 161.8 | 168.7 | 175.6 |
| 12: 9 | 153 | 1 | 155.2437 | 0.04461 | 6.9254 | 134.5 | 141.4 | 148.3 | 155.2 | 162.2 | 169.1 | 176.0 |
| 12:10 | 154 | 1 | 155.6330 | 0.04454 | 6.9319 | 134.8 | 141.8 | 148.7 | 155.6 | 162.6 | 169.5 | 176.4 |
| 12:11 | 155 | 1 | 156.0101 | 0.04446 | 6.9362 | 135.2 | 142.1 | 149.1 | 156.0 | 162.9 | 169.9 | 176.8 |
| 13: 0 | 156 | 1 | 156.3748 | 0.04439 | 6.9415 | 135.6 | 142.5 | 149.4 | 156.4 | 163.3 | 170.3 | 177.2 |
| 13: 1 | 157 | 1 | 156.7269 | 0.04431 | 6.9446 | 135.9 | 142.8 | 149.8 | 156.7 | 163.7 | 170.6 | 177.6 |
| 13: 2 | 158 | 1 | 157.0666 | 0.04423 | 6.9471 | 136.2 | 143.2 | 150.1 | 157.1 | 164.0 | 171.0 | 177.9 |
| 13: 3 | 159 | 1 | 157.3936 | 0.04415 | 6.9489 | 136.5 | 143.5 | 150.4 | 157.4 | 164.3 | 171.3 | 178.2 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)

| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 13: 4 | 160 | 1 | 157.7082 | 0.04408 | 6.9518 | 136.9 | 143.8 | 150.8 | 157.7 | 164.7 | 171.6 | 178.6 |
| 13: 5 | 161 | 1 | 158.0102 | 0.04400 | 6.9524 | 137.2 | 144.1 | 151.1 | 158.0 | 165.0 | 171.9 | 178.9 |
| 13: 6 | 162 | 1 | 158.2997 | 0.04392 | 6.9525 | 137.4 | 144.4 | 151.3 | 158.3 | 165.3 | 172.2 | 179.2 |
| 13: 7 | 163 | 1 | 158.5771 | 0.04384 | 6.9520 | 137.7 | 144.7 | 151.6 | 158.6 | 165.5 | 172.5 | 179.4 |
| 13: 8 | 164 | 1 | 158.8425 | 0.04376 | 6.9509 | 138.0 | 144.9 | 151.9 | 158.8 | 165.8 | 172.7 | 179.7 |
| 13: 9 | 165 | 1 | 159.0961 | 0.04369 | 6.9509 | 138.2 | 145.2 | 152.1 | 159.1 | 166.0 | 173.0 | 179.9 |
| 13:10 | 166 | 1 | 159.3382 | 0.04361 | 6.9487 | 138.5 | 145.4 | 152.4 | 159.3 | 166.3 | 173.2 | 180.2 |
| 13:11 | 167 | 1 | 159.5691 | 0.04353 | 6.9460 | 138.7 | 145.7 | 152.6 | 159.6 | 166.5 | 173.5 | 180.4 |
| 14: 0 | 168 | 1 | 159.7890 | 0.04345 | 6.9428 | 139.0 | 145.9 | 152.8 | 159.8 | 166.7 | 173.7 | 180.6 |
| 14: 1 | 169 | 1 | 159.9983 | 0.04337 | 6.9391 | 139.2 | 146.1 | 153.1 | 160.0 | 166.9 | 173.9 | 180.8 |
| 14: 2 | 170 | 1 | 160.1971 | 0.04330 | 6.9365 | 139.4 | 146.3 | 153.3 | 160.2 | 167.1 | 174.1 | 181.0 |
| 14: 3 | 171 | 1 | 160.3857 | 0.04322 | 6.9319 | 139.6 | 146.5 | 153.5 | 160.4 | 167.3 | 174.2 | 181.2 |
| 14: 4 | 172 | 1 | 160.5643 | 0.04314 | 6.9267 | 139.8 | 146.7 | 153.6 | 160.6 | 167.5 | 174.4 | 181.3 |
| 14: 5 | 173 | 1 | 160.7332 | 0.04307 | 6.9228 | 140.0 | 146.9 | 153.8 | 160.7 | 167.7 | 174.6 | 181.5 |
| 14: 6 | 174 | 1 | 160.8927 | 0.04299 | 6.9168 | 140.1 | 147.1 | 154.0 | 160.9 | 167.8 | 174.7 | 181.6 |
| 14: 7 | 175 | 1 | 161.0430 | 0.04292 | 6.9120 | 140.3 | 147.2 | 154.1 | 161.0 | 168.0 | 174.9 | 181.8 |
| 14: 8 | 176 | 1 | 161.1845 | 0.04284 | 6.9051 | 140.5 | 147.4 | 154.3 | 161.2 | 168.1 | 175.0 | 181.9 |
| 14: 9 | 177 | 1 | 161.3176 | 0.04277 | 6.8996 | 140.6 | 147.5 | 154.4 | 161.3 | 168.2 | 175.1 | 182.0 |
| 14:10 | 178 | 1 | 161.4425 | 0.04270 | 6.8936 | 140.8 | 147.7 | 154.5 | 161.4 | 168.3 | 175.2 | 182.1 |
| 14:11 | 179 | 1 | 161.5596 | 0.04263 | 6.8873 | 140.9 | 147.8 | 154.7 | 161.6 | 168.4 | 175.3 | 182.2 |
| 15: 0 | 180 | 1 | 161.6692 | 0.04255 | 6.8790 | 141.0 | 147.9 | 154.8 | 161.7 | 168.5 | 175.4 | 182.3 |
| 15: 1 | 181 | 1 | 161.7717 | 0.04248 | 6.8721 | 141.2 | 148.0 | 154.9 | 161.8 | 168.6 | 175.5 | 182.4 |
| 15: 2 | 182 | 1 | 161.8673 | 0.04241 | 6.8648 | 141.3 | 148.1 | 155.0 | 161.9 | 168.7 | 175.6 | 182.5 |
| 15: 3 | 183 | 1 | 161.9564 | 0.04235 | 6.8589 | 141.4 | 148.2 | 155.1 | 162.0 | 168.8 | 175.7 | 182.5 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)

| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 15: 4 | 184 | 1 | 162.0393 | 0.04228 | 6.8510 | 141.5 | 148.3 | 155.2 | 162.0 | 168.9 | 175.7 | 182.6 |
| 15: 5 | 185 | 1 | 162.1164 | 0.04221 | 6.8429 | 141.6 | 148.4 | 155.3 | 162.1 | 169.0 | 175.8 | 182.6 |
| 15: 6 | 186 | 1 | 162.1880 | 0.04214 | 6.8346 | 141.7 | 148.5 | 155.4 | 162.2 | 169.0 | 175.9 | 182.7 |
| 15: 7 | 187 | 1 | 162.2542 | 0.04208 | 6.8277 | 141.8 | 148.6 | 155.4 | 162.3 | 169.1 | 175.9 | 182.7 |
| 15: 8 | 188 | 1 | 162.3154 | 0.04201 | 6.8189 | 141.9 | 148.7 | 155.5 | 162.3 | 169.1 | 176.0 | 182.8 |
| 15: 9 | 189 | 1 | 162.3719 | 0.04195 | 6.8115 | 141.9 | 148.7 | 155.6 | 162.4 | 169.2 | 176.0 | 182.8 |
| 15:10 | 190 | 1 | 162.4239 | 0.04189 | 6.8039 | 142.0 | 148.8 | 155.6 | 162.4 | 169.2 | 176.0 | 182.8 |
| 15:11 | 191 | 1 | 162.4717 | 0.04182 | 6.7946 | 142.1 | 148.9 | 155.7 | 162.5 | 169.3 | 176.1 | 182.9 |
| 16: 0 | 192 | 1 | 162.5156 | 0.04176 | 6.7867 | 142.2 | 148.9 | 155.7 | 162.5 | 169.3 | 176.1 | 182.9 |
| 16: 1 | 193 | 1 | 162.5560 | 0.04170 | 6.7786 | 142.2 | 149.0 | 155.8 | 162.6 | 169.3 | 176.1 | 182.9 |
| 16: 2 | 194 | 1 | 162.5933 | 0.04164 | 6.7704 | 142.3 | 149.1 | 155.8 | 162.6 | 169.4 | 176.1 | 182.9 |
| 16: 3 | 195 | 1 | 162.6276 | 0.04158 | 6.7621 | 142.3 | 149.1 | 155.9 | 162.6 | 169.4 | 176.2 | 182.9 |
| 16: 4 | 196 | 1 | 162.6594 | 0.04152 | 6.7536 | 142.4 | 149.2 | 155.9 | 162.7 | 169.4 | 176.2 | 182.9 |
| 16: 5 | 197 | 1 | 162.6890 | 0.04147 | 6.7467 | 142.4 | 149.2 | 155.9 | 162.7 | 169.4 | 176.2 | 182.9 |
| 16: 6 | 198 | 1 | 162.7165 | 0.04141 | 6.7381 | 142.5 | 149.2 | 156.0 | 162.7 | 169.5 | 176.2 | 182.9 |
| 16: 7 | 199 | 1 | 162.7425 | 0.04136 | 6.7310 | 142.5 | 149.3 | 156.0 | 162.7 | 169.5 | 176.2 | 182.9 |
| 16: 8 | 200 | 1 | 162.7670 | 0.04130 | 6.7223 | 142.6 | 149.3 | 156.0 | 162.8 | 169.5 | 176.2 | 182.9 |
| 16: 9 | 201 | 1 | 162.7904 | 0.04125 | 6.7151 | 142.6 | 149.4 | 156.1 | 162.8 | 169.5 | 176.2 | 182.9 |
| 16:10 | 202 | 1 | 162.8126 | 0.04119 | 6.7063 | 142.7 | 149.4 | 156.1 | 162.8 | 169.5 | 176.2 | 182.9 |
| 16:11 | 203 | 1 | 162.8340 | 0.04114 | 6.6990 | 142.7 | 149.4 | 156.1 | 162.8 | 169.5 | 176.2 | 182.9 |
| 17: 0 | 204 | 1 | 162.8545 | 0.04109 | 6.6917 | 142.8 | 149.5 | 156.2 | 162.9 | 169.5 | 176.2 | 182.9 |
| 17: 1 | 205 | 1 | 162.8743 | 0.04104 | 6.6844 | 142.8 | 149.5 | 156.2 | 162.9 | 169.6 | 176.2 | 182.9 |
| 17: 2 | 206 | 1 | 162.8935 | 0.04099 | 6.6770 | 142.9 | 149.5 | 156.2 | 162.9 | 169.6 | 176.2 | 182.9 |
| 17: 3 | 207 | 1 | 162.9120 | 0.04094 | 6.6696 | 142.9 | 149.6 | 156.2 | 162.9 | 169.6 | 176.3 | 182.9 |

2007 WHO Reference

Height-for-age GIRLS

5 to 19 years (z-scores)

| Year: Month | Month | L | M | S | SD | Z-scores (height in cm) | | | | | | |
|-------------|-------|---|----------|---------|--------|-------------------------|-------|-------|--------|-------|-------|-------|
| | | | | | | -3 SD | -2 SD | -1 SD | Median | 1 SD | 2 SD | 3 SD |
| 17: 4 | 208 | 1 | 162.9300 | 0.04089 | 6.6622 | 142.9 | 149.6 | 156.3 | 162.9 | 169.6 | 176.3 | 182.9 |
| 17: 5 | 209 | 1 | 162.9476 | 0.04084 | 6.6548 | 143.0 | 149.6 | 156.3 | 162.9 | 169.6 | 176.3 | 182.9 |
| 17: 6 | 210 | 1 | 162.9649 | 0.04080 | 6.6490 | 143.0 | 149.7 | 156.3 | 163.0 | 169.6 | 176.3 | 182.9 |
| 17: 7 | 211 | 1 | 162.9817 | 0.04075 | 6.6415 | 143.1 | 149.7 | 156.3 | 163.0 | 169.6 | 176.3 | 182.9 |
| 17: 8 | 212 | 1 | 162.9983 | 0.04071 | 6.6357 | 143.1 | 149.7 | 156.4 | 163.0 | 169.6 | 176.3 | 182.9 |
| 17: 9 | 213 | 1 | 163.0144 | 0.04066 | 6.6282 | 143.1 | 149.8 | 156.4 | 163.0 | 169.6 | 176.3 | 182.9 |
| 17:10 | 214 | 1 | 163.0300 | 0.04062 | 6.6223 | 143.2 | 149.8 | 156.4 | 163.0 | 169.7 | 176.3 | 182.9 |
| 17:11 | 215 | 1 | 163.0451 | 0.04058 | 6.6164 | 143.2 | 149.8 | 156.4 | 163.0 | 169.7 | 176.3 | 182.9 |
| 18: 0 | 216 | 1 | 163.0595 | 0.04053 | 6.6088 | 143.2 | 149.8 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 1 | 217 | 1 | 163.0733 | 0.04049 | 6.6028 | 143.3 | 149.9 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 2 | 218 | 1 | 163.0862 | 0.04045 | 6.5968 | 143.3 | 149.9 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 3 | 219 | 1 | 163.0982 | 0.04041 | 6.5908 | 143.3 | 149.9 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 4 | 220 | 1 | 163.1092 | 0.04037 | 6.5847 | 143.4 | 149.9 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 5 | 221 | 1 | 163.1192 | 0.04034 | 6.5802 | 143.4 | 150.0 | 156.5 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 6 | 222 | 1 | 163.1279 | 0.04030 | 6.5741 | 143.4 | 150.0 | 156.6 | 163.1 | 169.7 | 176.3 | 182.9 |
| 18: 7 | 223 | 1 | 163.1355 | 0.04026 | 6.5678 | 143.4 | 150.0 | 156.6 | 163.1 | 169.7 | 176.3 | 182.8 |
| 18: 8 | 224 | 1 | 163.1418 | 0.04023 | 6.5632 | 143.5 | 150.0 | 156.6 | 163.1 | 169.7 | 176.3 | 182.8 |
| 18: 9 | 225 | 1 | 163.1469 | 0.04019 | 6.5569 | 143.5 | 150.0 | 156.6 | 163.1 | 169.7 | 176.3 | 182.8 |
| 18:10 | 226 | 1 | 163.1508 | 0.04016 | 6.5521 | 143.5 | 150.0 | 156.6 | 163.2 | 169.7 | 176.3 | 182.8 |
| 18:11 | 227 | 1 | 163.1534 | 0.04012 | 6.5457 | 143.5 | 150.1 | 156.6 | 163.2 | 169.7 | 176.2 | 182.8 |
| 19: 0 | 228 | 1 | 163.1548 | 0.04009 | 6.5409 | 143.5 | 150.1 | 156.6 | 163.2 | 169.7 | 176.2 | 182.8 |

2007 WHO Reference