**Phụ lục 1**

**HÀM Q VÀ ERFC**

Công thức hàm lỗi bù và hàm Q(u):

, 

quan hệ giữa hàm lỗi bù và hàm Q(u) được cho như sau:



**Bảng PL 13.1 . Bảng Q(u)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **Q(u)** |  |  |  |  |  |
| **u** | **0.00** | **0.01** | **0.02** | **0.03** | **0.04** | **0.05** | **0.06** | **0.07** | **0.08** | **0.09** |
| **0.0** | 0.50000 | 0.49601 | 0.49202 | 0.48803 | 0.48405 | 0.48006 | 0.47608 | 0.47210 | 0.46812 | 0.46414 |
| **0.1** | 0.46017 | 0.45620 | 0.45224 | 0.44828 | 0.44433 | 0.44038 | 0.43644 | 0.43251 | 0.42858 | 0.42465 |
| **0.2** | 0.42074 | 0.41683 | 0.41294 | 0.40905 | 0.40517 | 0.40129 | 0.39743 | 0.39358 | 0.38974 | 0.38591 |
| **0.3** | 0.38209 | 0.37828 | 0.37448 | 0.37070 | 0.36693 | 0.36317 | 0.35942 | 0.35569 | 0.35197 | 0.34827 |
| **0.4** | 0.34458 | 0.34090 | 0.33724 | 0.33360 | 0.32997 | 0.32636 | 0.32276 | 0.31918 | 0.31561 | 0.31207 |
| **0.5** | 0.30854 | 0.30503 | 0.30153 | 0.29806 | 0.29460 | 0.29116 | 0.28774 | 0.28434 | 0.28096 | 0.27760 |
| **0.6** | 0.27425 | 0.27093 | 0.26763 | 0.26435 | 0.26109 | 0.25785 | 0.25463 | 0.25143 | 0.24825 | 0.24510 |
| **0.7** | 0.24196 | 0.23885 | 0.23576 | 0.23270 | 0.22965 | 0.22663 | 0.22363 | 0.22065 | 0.21770 | 0.21476 |
| **0.8** | 0.21186 | 0.20897 | 0.20611 | 0.20327 | 0.20045 | 0.19766 | 0.19489 | 0.19215 | 0.18943 | 0.18673 |
| **0.9** | 0.18406 | 0.18141 | 0.17879 | 0.17619 | 0.17361 | 0.17106 | 0.16853 | 0.16602 | 0.16354 | 0.16109 |
| **1.0** | 0.15866 | 0.15625 | 0.15386 | 0.15151 | 0.14917 | 0.14686 | 0.14457 | 0.14231 | 0.14007 | 0.13786 |
| **1.1** | 0.13567 | 0.13350 | 0.13136 | 0.12924 | 0.12714 | 0.12507 | 0.12302 | 0.12100 | 0.11900 | 0.11702 |
| **1.2** | 0.11507 | 0.11314 | 0.11123 | 0.10935 | 0.10749 | 0.10565 | 0.10383 | 0.10204 | 0.10027 | 0.09853 |
| **1.3** | 0.09680 | 0.09510 | 0.09342 | 0.09176 | 0.09012 | 0.08851 | 0.08692 | 0.08534 | 0.08379 | 0.08226 |
| **1.4** | 0.08076 | 0.07927 | 0.07780 | 0.07636 | 0.07493 | 0.07353 | 0.07215 | 0.07078 | 0.06944 | 0.06811 |
| **1.5** | 0.06681 | 0.06552 | 0.06426 | 0.06301 | 0.06178 | 0.06057 | 0.05938 | 0.05821 | 0.05705 | 0.05592 |
| **1.6** | 0.05480 | 0.05370 | 0.05262 | 0.05155 | 0.05050 | 0.04947 | 0.04846 | 0.04746 | 0.04648 | 0.04551 |
| **1.7** | 0.04457 | 0.04363 | 0.04272 | 0.04182 | 0.04093 | 0.04006 | 0.03920 | 0.03836 | 0.03754 | 0.03673 |
| **1.8** | 0.03593 | 0.03515 | 0.03438 | 0.03363 | 0.03288 | 0.03216 | 0.03144 | 0.03074 | 0.03005 | 0.02938 |
| **1.9** | 0.02872 | 0.02807 | 0.02743 | 0.02680 | 0.02619 | 0.02559 | 0.02500 | 0.02442 | 0.02385 | 0.02330 |
| **2.0** | 0.02275 | 0.02222 | 0.02169 | 0.02118 | 0.02068 | 0.02018 | 0.01970 | 0.01923 | 0.01876 | 0.01831 |
| **2.1** | 0.01786 | 0.01743 | 0.01700 | 0.01659 | 0.01618 | 0.01578 | 0.01539 | 0.01500 | 0.01463 | 0.01426 |
| **2.2** | 0.01390 | 0.01355 | 0.01321 | 0.01287 | 0.01255 | 0.01222 | 0.01191 | 0.01160 | 0.01130 | 0.01101 |
| **2.3** | 0.01072 | 0.01044 | 0.01017 | 0.00990 | 0.00964 | 0.00939 | 0.00914 | 0.00889 | 0.00866 | 0.00842 |
| **2.4** | 0.00820 | 0.00798 | 0.00776 | 0.00755 | 0.00734 | 0.00714 | 0.00695 | 0.00676 | 0.00657 | 0.00639 |
| **2.5** | 0.00621 | 0.00604 | 0.00587 | 0.00570 | 0.00554 | 0.00539 | 0.00523 | 0.00508 | 0.00494 | 0.00480 |
| **2.6** | 0.00466 | 0.00453 | 0.00440 | 0.00427 | 0.00415 | 0.00402 | 0.00391 | 0.00379 | 0.00368 | 0.00357 |
| **2.7** | 0.00347 | 0.00336 | 0.00326 | 0.00317 | 0.00307 | 0.00298 | 0.00289 | 0.00280 | 0.00272 | 0.00264 |
| **2.8** | 0.00256 | 0.00248 | 0.00240 | 0.00233 | 0.00226 | 0.00219 | 0.00212 | 0.00205 | 0.00199 | 0.00193 |
| **2.9** | 0.00187 | 0.00181 | 0.00175 | 0.00169 | 0.00164 | 0.00159 | 0.00154 | 0.00149 | 0.00144 | 0.00139 |
| **3.0** | 0.00135 | 0.00131 | 0.00126 | 0.00122 | 0.00118 | 0.00114 | 0.00111 | 0.00107 | 0.00104 | 0.00100 |
| **3.1** | 0.00097 | 0.00094 | 0.00090 | 0.00087 | 0.00084 | 0.00082 | 0.00079 | 0.00076 | 0.00074 | 0.00071 |
| **3.2** | 0.00069 | 0.00066 | 0.00064 | 0.00062 | 0.00060 | 0.00058 | 0.00056 | 0.00054 | 0.00052 | 0.00050 |
| **3.3** | 0.00048 | 0.00047 | 0.00045 | 0.00043 | 0.00042 | 0.00040 | 0.00039 | 0.00038 | 0.00036 | 0.00035 |
| **3.4** | 0.00034 | 0.00032 | 0.00031 | 0.00030 | 0.00029 | 0.00028 | 0.00027 | 0.00026 | 0.00025 | 0.00024 |
| **3.5** | 0.00023 | 0.00022 | 0.00022 | 0.00021 | 0.00020 | 0.00019 | 0.00019 | 0.00018 | 0.00017 | 0.00017 |
| **3.6** | 1.59E-04 | 1.53E-04 | 1.47E-04 | 1.42E-04 | 1.36E-04 | 1.31E-04 | 1.26E-04 | 1.21E-04 | 1.17E-04 | 1.12E-04 |
| **3.7** | 1.08E-04 | 1.04E-04 | 9.96E-05 | 9.57E-05 | 9.20E-05 | 8.84E-05 | 8.50E-05 | 8.16E-05 | 7.84E-05 | 7.53E-05 |
| **3.8** | 7.23E-05 | 6.95E-05 | 6.67E-05 | 6.41E-05 | 6.15E-05 | 5.91E-05 | 5.67E-05 | 5.44E-05 | 5.22E-05 | 5.01E-05 |
| **3.9** | 4.81E-05 | 4.61E-05 | 4.43E-05 | 4.25E-05 | 4.07E-05 | 3.91E-05 | 3.75E-05 | 3.59E-05 | 3.45E-05 | 3.30E-05 |
| **4.0** | 3.17E-05 | 3.04E-05 | 2.91E-05 | 2.79E-05 | 2.67E-05 | 2.56E-05 | 2.45E-05 | 2.35E-05 | 2.25E-05 | 2.16E-05 |
| **4.1** | 2.07E-05 | 1.98E-05 | 1.89E-05 | 1.81E-05 | 1.74E-05 | 1.66E-05 | 1.59E-05 | 1.52E-05 | 1.46E-05 | 1.39E-05 |
| **4.2** | 1.33E-05 | 1.28E-05 | 1.22E-05 | 1.17E-05 | 1.12E-05 | 1.07E-05 | 1.02E-05 | 9.77E-06 | 9.34E-06 | 8.93E-06 |
| **4.3** | 8.54E-06 | 8.16E-06 | 7.80E-06 | 7.46E-06 | 7.12E-06 | 6.81E-06 | 6.50E-06 | 6.21E-06 | 5.93E-06 | 5.67E-06 |
| **4.4** | 5.41E-06 | 5.17E-06 | 4.94E-06 | 4.71E-06 | 4.50E-06 | 4.29E-06 | 4.10E-06 | 3.91E-06 | 3.73E-06 | 3.56E-06 |
| **4.5** | 3.40E-06 | 3.24E-06 | 3.09E-06 | 2.95E-06 | 2.81E-06 | 2.68E-06 | 2.56E-06 | 2.44E-06 | 2.32E-06 | 2.22E-06 |
| **4.6** | 2.11E-06 | 2.01E-06 | 1.92E-06 | 1.83E-06 | 1.74E-06 | 1.66E-06 | 1.58E-06 | 1.51E-06 | 1.43E-06 | 1.37E-06 |
| **4.7** | 1.30E-06 | 1.24E-06 | 1.18E-06 | 1.12E-06 | 1.07E-06 | 1.02E-06 | 9.68E-07 | 9.21E-07 | 8.76E-07 | 8.34E-07 |
| **4.8** | 7.93E-07 | 7.55E-07 | 7.18E-07 | 6.83E-07 | 6.49E-07 | 6.17E-07 | 5.87E-07 | 5.58E-07 | 5.30E-07 | 5.04E-07 |