

Supplement to Gaussian Quadrature Involving Einstein and Fermi Functions with an Application to Summation of Series

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TABLE 5. Nodes and weights for n-point Gaussian quadrature with respect to the weight function $\epsilon_1(t) = t/(e^t - 1)$ on $(0, \infty)$, $n=5(5)40$.

| n | zero(n) | weight(n) |
|----|--------------------------------|--------------------------------|
| 1 | 3.479535131203533535888906d-01 | 7.413801893864949064648418d-01 |
| 2 | 1.789519270251396059078587d+00 | 7.112793968534230324727631d-01 |
| 3 | 4.317073039784563286568702d+00 | 1.810544213015127812690667d-01 |
| 4 | 8.124316435674601205701546d+00 | 1.113156581019995660932093d-02 |
| 5 | 1.399259503591182245471045d+01 | 8.849349659575965642269187d-05 |
| | | |
| n | zero(n) | weight(n) |
| 1 | 1.712764587800172362970467d-01 | 4.017581983871970550764847d-01 |
| 2 | 8.916728564071628155969295d-01 | 6.178151502068598877652466d-01 |
| 3 | 2.154696241995276926728150d+00 | 4.309238491671243158403736d-01 |
| 4 | 3.940962194432075308546014d+00 | 1.601831853477292223382136d-01 |
| 5 | 6.273054978120200583717756d+00 | 3.111600156831707548706688d-02 |
| 6 | 9.219833208404748987213936d+00 | 3.002950279906314058385099d-03 |
| 7 | 1.289612902426177067770092d+01 | 1.324400356318608169220646d-04 |
| 8 | 1.749262020229698453921089d+01 | 2.280734015322767264428365d-06 |
| 9 | 2.337506876689075787489480d+01 | 1.111475587288852659683946d-08 |
| 10 | 3.148092990870547794581304d+01 | 6.689509433931585817256954d-12 |
| | | |
| n | zero(n) | weight(n) |
| 1 | 1.122689742882840428560134d-01 | 2.717674922677317952221318d-01 |
| 2 | 5.872942570832169304369100d-01 | 4.852206727225164096245477d-01 |
| 3 | 1.427134594172779508922935d+00 | 4.581586361360587417881249d-01 |
| 4 | 2.616230204390486070960179d+00 | 2.806056660239435321238224d-01 |
| 5 | 4.148505367683641117556727d+00 | 1.135140668971388075471236d-01 |
| 6 | 6.033516951668504802085092d+00 | 2.998304918534276590192265d-02 |
| 7 | 8.294299990936086527007386d+00 | 5.098666065215486743990180d-03 |
| 8 | 1.096384343614386146477958d+01 | 5.482040128082603574763532d-04 |
| 9 | 1.408587628929527609167703d+01 | 3.618564942449709026477206d-05 |
| 10 | 1.771999691156769233871477d+01 | 1.398222595231963340037460d-06 |
| 11 | 2.195126297803758949286577d+01 | 2.936603420052541839075062d-08 |
| 12 | 2.690847821599200481688143d+01 | 2.982123035751269147999240d-10 |
| 13 | 3.280454835374218314720542d+01 | 1.203079310277072656860401d-12 |
| 14 | 4.004648974077095940531751d+01 | 1.324544206896025265830478d-15 |
| 15 | 4.967641464169027902025467d+01 | 1.546415245123910288693076d-19 |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|---------------------------------|----|-----------------------------------|----------------------------------|
| 1 | 8.310292185949766711575308d-02 | 2.042884291812021802679753d-01 | 1 | 5.4382988222784271969068699d-02 | 1.35711384536034449491466130d-01 |
| 2 | 4.357281365840647789931564d-01 | 3.9188324512589928334935442d-01 | 2 | 2.857467537931680134315893d-01 | 2.789516672616052372409648d-01 |
| 3 | 1.0629316836914052847414280d+00 | 4.266391827938016222411210d-01 | 3 | 6.989451403730449420372059d-01 | 3.47359688705668223506285d-01 |
| 4 | 1.9530106887808903242077174d+00 | 3.292145738679345388649743d-01 | 4 | 1.289651593396426793118676d+00 | 3.32200209736646599996702d-01 |
| 5 | 1.00288989803218102852714d+00 | 1.863502498233567425985873d-01 | 5 | 2.053197350811564279345059d+00 | 2.565131689266101146922356d-01 |
| 6 | 4.502988516694598635090355d+00 | 7.72593320038122067320656d-02 | 6 | 2.086133967866396860357654315d+00 | 1.6146634614878673517272120d-01 |
| 7 | 1.67227136864963620977259d+00 | 2.330885073824775753406278d-03 | 7 | 4.087345268609994654098197d+00 | 8.272396766696146555790681d-02 |
| 8 | 1.04499198625121833990601d+00 | 5.091890520845775753406278d-03 | 8 | 5.35826017362337790484118d+00 | 3.439688237385421005464031d-02 |
| 9 | 1.03298765387808549569074d+01 | 8.0096060846282663668086d-04 | 9 | 8.092376146485903399493389d+00 | 1.159349029831943123340784d-03 |
| 10 | 1.28617651360213205949178d+01 | 8.987269193291915964495063d-06 | 10 | 1.0228871785465842243893869d+01 | 3.167396632459583314498733d-03 |
| 11 | 1.5728763180313341278325d+01 | 7.0841644395361157886161963d-06 | 11 | 1.222298588700230603162806d+01 | 7.012757527257453396891369d-04 |
| 12 | 1.89416112774580831906485d+01 | 3.83537811782285933037544d-07 | 12 | 1.4413332410203210603625903d+01 | 1.816212341227320721628076d-05 |
| 13 | 2.254714844465903653050310d+01 | 1.381962787813625638861735d-08 | 13 | 1.68079383250298891840948d+01 | 2.107708512228129625597429d-06 |
| 14 | 2.661031578889070864102766d+01 | 3.173041790241308198585695d-10 | 14 | 1.941610608521381697433139d+01 | 1.950612468920813042699543d-07 |
| 15 | 3.117398575321973390709566d+01 | 4.36963450614604022445702d-12 | 15 | 2.224868269538485933109707d+01 | 1.427172431764471949458532d-08 |
| 16 | 3.633840853205501505029207d+01 | 3.308471856566900381471409d-14 | 16 | 2.864029526125405106673303d+01 | 8.16593532927494024219892d-10 |
| 17 | 4.224332445094454135160503d+01 | 1.207390945203723202412839d-16 | 17 | 2.864029526125405106673303d+01 | 3.605285081298255945450259d-11 |
| 18 | 4.911888324720829614936405d+01 | 1.710004627434887139767069d-19 | 18 | 3.223231036629715974370603d+01 | 1.20819895408565993100711d-12 |
| 19 | 5.740463788076877647913530d+01 | 6.232029670607160676256261d-23 | 19 | 3.61616100812393977618262d+01 | 3.018085100854339381469742d-14 |
| 20 | 6.82273924365916314681691d+01 | 2.078080927006547641307737d-27 | 20 | 4.031827149828725997661205d+01 | 5.446762450080303536410332d-16 |
| | | | 21 | 4.487160564738557667455811d+01 | 6.925348259346319295907108d-18 |
| | | | 22 | 4.981800445910902226825170d+01 | 5.947504364226864778884078d-20 |
| | | | 23 | 5.21203208896736860439654d+01 | 3.273850494393105235962204d-22 |
| | | | 24 | 6.112730532615825917058112d+01 | 1.076163401603809722223533d-24 |
| | | | 25 | 6.766772661286989119602791d+01 | 1.911811384059167009209599d-27 |
| | | | 26 | 7.4989379608407069860851332d+01 | 1.580539289072827435074363d-30 |
| | | | 27 | 8.334928063050538234499482d+01 | 4.758938328794456297386651d-34 |
| | | | 28 | 9.32388748264442453248618d+01 | 3.2788680277178457511832253d-38 |
| | | | 29 | 1.059215813876086650104625d+02 | 1.5971345527231257314226753d-43 |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|----------------------------------|----|-----------------------------------|----------------------------------|
| 1 | 6.5802112437069552697122027d-02 | 1.632338619906017392323208d-01 | 1 | 5.4382988222784271969068699d-02 | 1.35711384536034449491466130d-01 |
| 2 | 3.454652594576143288681572d-01 | 3.264995799892914895675456d-01 | 2 | 2.857467537931680134315893d-01 | 2.789516672616052372409648d-01 |
| 3 | 8.439203919528373933017310d-01 | 3.857158381140828939152248d-01 | 3 | 6.989451403730449420372059d-01 | 3.47359688705668223506285d-01 |
| 4 | 1.554809080180034026260552d+00 | 3.39303394455933083503508d-01 | 4 | 1.289651593396426793118676d+00 | 3.32200209736646599996702d-01 |
| 5 | 2.47200898233262172612265d+00 | 1.24261919141019415678124d-01 | 5 | 2.053197350811564279345059d+00 | 2.565131689266101146922356d-01 |
| 6 | 3.592182833295968701819289d+00 | 5.17857734643480753008984d-02 | 6 | 2.086133967866396860357654315d+00 | 1.6146634614878673517272120d-01 |
| 7 | 4.916087171674104398653230d+00 | 1.675412483075005200877970d-02 | 7 | 4.087345268609994654098197d+00 | 8.272396766696146555790681d-02 |
| 8 | 6.448177589619150521745999d+00 | 4.2015023995202097262607475d-03 | 8 | 5.35826017362337790484118d+00 | 3.439688237385421005464031d-02 |
| 9 | 8.1953758039527369205245d+00 | 8.153224371438445572934396d-04 | 9 | 8.092376146485903399493389d+00 | 1.159349029831943123340784d-03 |
| 10 | 1.016617647647802845156764d+01 | 1.2199258316186515103005953d-04 | 10 | 1.0228871785465842243893869d+01 | 3.167396632459583314498733d-03 |
| 11 | 1.237050694986010251583211d+01 | 1.216291442199694143718963d-06 | 11 | 1.222298588700230603162806d+01 | 7.012757527257453396891369d-04 |
| 12 | 1.4819998596000337028629d+01 | 7.92201470946567202280682d-08 | 12 | 1.4413332410203210603625903d+01 | 1.816212341227320721628076d-05 |
| 13 | 1.7528474287334463829151d+01 | 3.797765323289787730879644d-09 | 13 | 1.68079383250298891840948d+01 | 2.107708512228129625597429d-06 |
| 14 | 2.05125471004008042443374d+01 | 1.3163994915105595377271716d-12 | 14 | 1.941610608521381697433139d+01 | 1.950612468920813042699543d-07 |
| 15 | 2.379240204967078747496408d+01 | 3.163994915105595377271716d-12 | 15 | 2.224868269538485933109707d+01 | 1.427172431764471949458532d-08 |
| 16 | 2.7392874947181901850715d+01 | 5.149346723069955469878620d-14 | 16 | 2.864029526125405106673303d+01 | 8.16593532927494024219892d-10 |
| 17 | 3.134500527047852044652511d+01 | 3.37533645242482076286676d-16 | 17 | 3.223231036629715974370603d+01 | 1.20819895408565993100711d-12 |
| 18 | 3.568836197390127479014987d+01 | 5.379576374697310276286676d-16 | 18 | 3.61616100812393977618262d+01 | 3.018085100854339381469742d-14 |
| 19 | 4.047468551325080356395514d+01 | 3.37533645242482076286676d-16 | 19 | 4.031827149828725997661205d+01 | 5.446762450080303536410332d-16 |
| 20 | 4.577391101972662823594952d+01 | 1.15752008522318033383345459d-18 | 20 | 4.487160564738557667455811d+01 | 6.925348259346319295907108d-18 |
| 21 | 5.16848516363488020834262d+01 | 1.8833136621546866817783069d-23 | 21 | 4.981800445910902226825170d+01 | 5.947504364226864778884078d-20 |
| 22 | 5.835600876969832602313894d+01 | 1.5269692425101367352195d-26 | 22 | 5.21203208896736860439654d+01 | 3.273850494393105235962204d-22 |
| 23 | 6.603187127498733594994263d+01 | 1.709778856000940070953466d-30 | 23 | 6.112730532615825917058112d+01 | 1.076163401603809722223533d-24 |
| 24 | 7.517958424699324236963953d+01 | 2.027724929396362307764551d-35 | 24 | 6.766772661286989119602791d+01 | 1.911811384059167009209599d-27 |
| 25 | 8.699847675132852164052276d+01 | | 25 | 7.4989379608407069860851332d+01 | 1.580539289072827435074363d-30 |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|---------------------------------|----|----------------------------------|---------------------------------|
| 1 | 4.629638939053648038050851d-02 | 1.160209721623326198032415d-01 | 1 | 4.027642627155319821611575d-02 | 1.012506051465152916650888d-01 |
| 2 | 2.433904147160421617309784d-01 | 2.430747370863567867483734d-01 | 2 | 2.118246020536128424007515d-01 | 2.151444132056384166857345d-01 |
| 3 | 5.958749242961976279508479d-01 | 3.139717028027611572136353d-01 | 3 | 5.1893104449986214893778060d-01 | 2.85463083969658297312452d-01 |
| 4 | 1.100675650539954374976659d+00 | 3.180795038074999420777409d-01 | 4 | 5.593309674999621840623349d-01 | 3.015946665553676861626754d-01 |
| 5 | 1.7542321449262755052615577d+00 | 2.667967644429622368843458d-01 | 5 | 1.530270420944645511228282d+00 | 2.686014565316910854064714d-01 |
| 6 | 2.553492448937758146494195d+00 | 1.87743397581102047336021d-01 | 6 | 2.292166925936642400263938d+00 | 2.048976213393353510343493d-01 |
| 7 | 3.49674849225542316861257d+00 | 1.1089773635443494809122621d-01 | 7 | 3.054218137136504801017125d+00 | 1.342056407759111522820005d-01 |
| 8 | 4.58401948476292932361049d+00 | 5.48573845352494809122621d-01 | 8 | 4.00478884867965608174188d+00 | 7.535366169639820594945359d-02 |
| 9 | 5.816881044664062971274843d+00 | 7.8475770352480750881930004d-02 | 9 | 5.081441733319194673022165d+00 | 3.62081422636698930100710d-02 |
| 10 | 7.19797849003306833648108d+00 | 2.270794353452153553435508d-03 | 10 | 2.85674590576647780251823d+00 | 1.488269791864044943018926d-02 |
| 11 | 8.730596821623130233856306d+00 | 5.4995905437179159066542827d-04 | 11 | 7.61957784039183130216236778d+00 | 5.235830715035084833361301d-03 |
| 12 | 1.041845102630181566375126d+01 | 1.1142336386058733695899658d-04 | 12 | 9.08559191344316351186877d+00 | 1.57800085545704542602621d-03 |
| 13 | 1.226566853756708545624715d+01 | 1.885495677111247047333198d-05 | 13 | 1.06864140917695679587776d+01 | 4.076582455108719046206243d-04 |
| 14 | 1.427866097043186801966903d+01 | 1.657646940748796140287716d-06 | 14 | 1.242498867729199782205893d+01 | 9.026417464258374502766313d-05 |
| 15 | 1.645722197494663245449914d+01 | 3.10829311714789495241371d-07 | 15 | 1.4304570580093474732455d+01 | 1.711562059346546718527925d-05 |
| 16 | 1.88126330519429161138443d+01 | 3.001478608986661296181900d-08 | 16 | 1.632879376930415712661978d+01 | 2.77472434343925977672114d-06 |
| 17 | 2.13487007068441211138443d+01 | 2.378229258946371630897019d-09 | 17 | 1.850165951750648238532631d+01 | 3.836750211834510437712391d-07 |
| 18 | 2.407629438153585324389926d+01 | 1.534720074537155621334844d-10 | 18 | 2.082767426437096965764641d+01 | 4.510980458194090910046308d-08 |
| 19 | 2.700091384220627023014107d+01 | 7.994271050933016312060418d-12 | 19 | 2.331187550062052466632298d+01 | 4.492277587787898873002057d-09 |
| 20 | 3.01369987724727425180674d+01 | 3.325730018240232342483386d-13 | 20 | 2.877816497695485351246553d+01 | 3.771708688566651183333181d-10 |
| 21 | 3.348630118917629414329745d+01 | 1.091113412258249556115534d-14 | 21 | 3.177360472381961100602398d+01 | 2.655285589157410645976151d-11 |
| 22 | 3.7072299910121786725852d+01 | 2.780949805724146314572690d-14 | 22 | 3.49549857273195647055896d+01 | 1.57445086103597703637020d-12 |
| 23 | 4.090766589626469393896714d+01 | 5.407815604966620528353139d-18 | 23 | 3.8330991083614926027730d+01 | 7.5547525862432979083750d-14 |
| 24 | 4.501136564961883091181934d+01 | 7.850102427722686261318025d-20 | 24 | 4.191245526011892013505405d+01 | 3.004667882004250624715945d-15 |
| 25 | 4.940619648434566469582332d+01 | 8.282074264136627778144285d-22 | 25 | 4.571164091189630387686372d+01 | 9.700657747585684672018333d-17 |
| 26 | 5.411995858335901150140966d+01 | 6.142676714874854420029805d-24 | 26 | 5.402262986790175217742416d+01 | 5.152466570907834873189349d-18 |
| 27 | 5.918715180760433137455737d+01 | 3.07239413758394238333700d-26 | 27 | 5.857093462991694389954622d+01 | 1.004218339166596189187859d-23 |
| 28 | 6.465152170602335847002889d+01 | 9.787205506757524953183605d-29 | 28 | 6.341146028688207781214304d+01 | 1.004218339166596189187859d-23 |
| 29 | 7.05700503571292609487030d+01 | 1.8474900496645574953183605d-31 | 29 | 6.8573125352713211204206d+01 | 9.15214217687191218843398d-26 |
| 30 | 7.70195625207835856100531d+01 | 1.86011082669201930658905d-34 | 30 | 7.409177811039529842285109d+01 | 6.056696194902923498784023d-28 |
| 31 | 8.41084553133244035372289d+01 | 8.54135706639268681535743d-38 | 31 | 8.00128385260981092009214d+01 | 8.754530587164438583366378d-33 |
| 32 | 9.19995744415592813254000d+01 | 1.3838078814918784337343d-41 | 32 | 8.639544071447261524679636d+01 | 1.727620337721382464209790d-35 |
| 33 | 1.009611806879563022942656d+02 | 4.85993585546290855563390d-46 | 33 | 9.331929260130560530924497d+01 | 1.99965986553747005973780d-38 |
| 34 | 1.115066088129493003159297d+02 | 1.077617385348555621940888d-51 | 34 | 1.00896860752685769218130d+02 | 1.217653152769588993200930d-41 |
| 35 | 1.249570787009553413876718d+02 | 1.077617385348555621940888d-51 | 35 | 1.09297145167294471120737d+02 | 3.31439521142265512730551d-45 |
| 36 | | | 36 | 1.187984674457912870563370d+02 | 3.087251177275722168786105d-49 |
| 37 | | | 37 | 1.299348055324342005461786d+02 | 5.9239303605844844847812808d-54 |
| 38 | | | 38 | | |
| 39 | | | 39 | | |
| 40 | | | 40 | | |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|----------------------------------|----|---------------------------------|-----------------------------------|
| 1 | 2.860640901456362637799111d-02 | 7.130539824082172861714658d-02 | 1 | 2.428074203069907885185755d-02 | 6.079209657163345842205187d-02 |
| 2 | 1.504341720728152755339148d-01 | 1.461179748774203396983343d-01 | 2 | 1.27737964797144626640095d-01 | 1.2704339646747679252321842d-01 |
| 3 | 3.68466304441300152774293d-01 | 1.816802818934565184375873d-01 | 3 | 1.30687806073233262878209d-01 | 1.638430941301040030504776d-01 |
| 4 | 6.809623160797577952208421d-01 | 1.748450085387480464697883d-01 | 4 | 5.7907123980244834907497472d-01 | 1.666802061486795685481485d-01 |
| 5 | 1.0857233383035119665208421d-01 | 1.378998913528624936492702d-01 | 5 | 9.241519906276529404763306d-01 | 1.420159343778880946689078d-01 |
| 6 | 1.580516335832068486614339d-00 | 9.051044698135047630133255d-02 | 6 | 1.34659859537002644900151d+00 | 1.4203341388981420811530714d-01 |
| 7 | 2.163508405939029070153683d-00 | 4.945242216853888466281302d-02 | 7 | 1.844842968801304491014122d+00 | 6.424892186934357586530160d-02 |
| 8 | 3.833637225929667601134378d+00 | 2.2362521544002458416065426d-02 | 8 | 2.417721680602385363583890d+00 | 3.413390546176088211682739d-02 |
| 9 | 3.590964867765755768641899d+00 | 8.30535838012895049477451d-03 | 9 | 3.064686870116931556218450d+00 | 1.539534251940080102071079d-02 |
| 10 | 4.436543341114572236614238d+00 | 6.51453769363428393147244811d-03 | 10 | 3.785909015729978483773838d+00 | 5.859798125291577027922611d-03 |
| 11 | 5.3725432954832218666077d+00 | 1.218332021165389908047651d-04 | 11 | 4.582275624811124615531234d+00 | 1.8722073079086014229718589d-03 |
| 12 | 6.401830458571104124098364d+00 | 1.929550212682811571788852d-05 | 12 | 5.4552987666747605415288433d+00 | 4.999576073271208305370189d-04 |
| 13 | 7.528118070753035780103836d+00 | 1.929550212682811571788852d-05 | 13 | 6.40699132903185114993392d+00 | 1.112052215274855591563746d-04 |
| 14 | 8.755604056442210194979299d+00 | 2.4365649454037205132225d-06 | 14 | 7.439762219476030147321471d+00 | 2.05408246607751781379373d-05 |
| 15 | 1.00891432793700643000951d+01 | 2.437405438376033321592d-06 | 15 | 8.556360407371198522906030d+00 | 3.140941637055136776705470d-06 |
| 16 | 1.153432128133382661558995d+01 | 1.915972348522048275662482d-08 | 16 | 9.759871944678018560148919d+01 | 3.961562438512911514981256d-07 |
| 17 | 1.30976299508980926784434d+01 | 1.17147333287377645326594d-09 | 17 | 1.05375923180274321952876d+01 | 4.10274263058645978882632d-08 |
| 18 | 1.47866599928948707327453d+01 | 1.17147333287377645326594d-09 | 18 | 1.244192970622515877492699d+01 | 3.469247242292601601824639d-09 |
| 19 | 1.661058520048577443057678d+01 | 5.500679400329088201870841d-11 | 19 | 1.39288264783102842634906d+01 | 2.3786578565654592152399928d-10 |
| 20 | 1.858021127574214808602102d+01 | 1.95329201827177056263897d-12 | 20 | 1.551949451561154054876938d+01 | 1.311270687651934414625853d-11 |
| 21 | 2.070890471466796700767933d+01 | 9.769074528131669839915588d-16 | 21 | 1.90368951062646029965903d+01 | 5.752912221041274570876418d-13 |
| 22 | 2.301323249737603854595930d+01 | 1.302842449737954189014431d-17 | 22 | 2.097841232801683712347278d+01 | 1.984265202063172198542600d-14 |
| 23 | 2.551422559442156059772148d+01 | 1.170751500579697919798888d-19 | 23 | 3.05403671870407716149415d+01 | 5.302004583436491884911551d-16 |
| 24 | 2.823930112809702682917979d+01 | 6.729258950878586266489658d-22 | 24 | 2.52752237559707181823349d+01 | 1.078213248691522612322110d-17 |
| 25 | 3.122544214013721936443025d+01 | 2.30578284919326983079098d-24 | 25 | 2.76593767152305367894509d+01 | 1.633168017763392389667646d-19 |
| 26 | 3.452484043976085216199960d+01 | 4.26419284117537210943323d-27 | 26 | 3.02135031908568937982211d+01 | 1.383560180992861460347323d-21 |
| 27 | 3.821589591048057010775138d+01 | 3.6666351182057376469225698d-30 | 27 | 3.296988458608106457120767d+01 | 7.178377890918460203028227d-26 |
| 28 | 4.24277082292576741407471d+01 | 1.147991910328682383818289d-33 | 28 | 3.595368776559047328686838d+01 | 2.372324090771668832836256d-28 |
| 29 | 4.74071471333028947499199d+01 | 8.231758837442905375809750d-38 | 29 | 3.923047789850128045773366d+01 | 4.637815760997716883024379569d-31 |
| 30 | 5.37889485871680887883679d+01 | 4.188057588893487641081942d-43 | 30 | 4.277366743948944633781523d+01 | 4.832424524612440657130848d-34 |
| 31 | | | 31 | 4.674600104688064175905114d+01 | 2.295544807280109227912596d-37 |
| 32 | | | 32 | 5.1255144372607436031020d+01 | 3.848042108225123395435789d-41 |
| 33 | | | 33 | 5.65588068383365118692020d+01 | 1.39988487734756801887049d-45 |
| 34 | | | 34 | 6.332034919124863493736705d+01 | 3.2270874666999595233382607d-51 |
| 35 | | | 35 | | |

TABLE 7. Nodes and weights for n-point Gaussian quadrature with respect to the weight function $\varphi_1(t) = 1/(e^t + 1)$ on $(0, \infty)$, $n=5(5)40$.

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|----------------------------------|---------------------------------|----|----------------------------------|---------------------------------|
| 1 | 2.1071224158754545432950260d-02 | 5.2930006347738729484422444d-02 | 1 | 3.004771004745240609038449d-01 | 3.238083464690713296482676d-01 |
| 2 | 1.108802295947379193811199d-01 | 1.122289319782701205987228d-01 | 2 | 1.52415287201707667861020d+00 | 3.04808234726896441779760d-01 |
| 3 | 1.71885440986129466394268d-01 | 1.48682967807320163811657d-01 | 3 | 5.59139578696215380740429d-02 | 6.559139578696215380740429d-02 |
| 4 | 0.32080305491193766972285d-01 | 1.57530313677358617352065d-01 | 4 | 3.1737045036646147420345689d+00 | 6.559139578696215380740429d-02 |
| 5 | 8.03602142835691144594868471d-01 | 1.419788399057008694682473d-01 | 5 | 4.71899575240060515108939379d+00 | 3.2454517267055762217539977d-03 |
| 6 | 1.71918191261831484854707d+00 | 1.112503362864760475894064d-01 | 6 | 1.2739545173222220061158005d+01 | 2.116310521660556604424092d-05 |
| 7 | 1.60686946684944601279277d+00 | 7.5968445017801145458890d-02 | | | |
| 8 | 2.1086810330190383901765705d+00 | 4.533212439778163779052090d-02 | | | |
| 9 | 2.671733864049661640444393d+00 | 2.350797913822209858562686d-02 | | | |
| 10 | 3.301056425226207985754290d+00 | 1.054969009195420112912292d-03 | | | |
| 11 | 3.995084421524835327954961d+00 | 4.0774870661524040083322781d-03 | | | |
| 12 | 4.7545616311905418539408871d+00 | 1.352083202236288148677429d-03 | | | |
| 13 | 5.580634498219478390996316d+00 | 3.85184783235378840191116d-04 | | | |
| 14 | 6.474767187990186062692527d+00 | 9.284526472348263891340798d-05 | | | |
| 15 | 7.438671465553397178603598d+00 | 1.914692460996036681104745d-05 | | | |
| 16 | 8.47267639946455944695824d+00 | 3.357210712039626033972880d-06 | | | |
| 17 | 9.583676997489169758674940d+00 | 4.993904867556843885220076d-07 | | | |
| 18 | 1.075923847224280488935923d+01 | 6.284886915234548384997596d-08 | | | |
| 19 | 1.203354125525267486930294d+01 | 6.69154278888596195346666d-09 | | | |
| 20 | 1.3379467751945423841564506d+01 | 5.942133032026464210420038d-10 | | | |
| 21 | 1.481024483501139175694213d+01 | 4.4230086042149240181219659d-11 | | | |
| 22 | 1.632950418762419031071571d+01 | 2.733915292092100699576874d-12 | | | |
| 23 | 1.794135447507406394582320d+01 | 1.393364966899785343922130d-13 | | | |
| 24 | 1.965046954337058080641820d+01 | 5.80692491533856757661671d-15 | | | |
| 25 | 2.14621983696978524963230d+01 | 1.959755539699167036485097d-16 | | | |
| 26 | 2.338270458410598728896819d+01 | 5.295148972819567535080714d-18 | | | |
| 27 | 2.541914655815918202371198d+01 | 1.130182936991427282118170d-19 | | | |
| 28 | 2.757991401494335194206524d+01 | 1.875514765655157885572522d-21 | | | |
| 29 | 2.9874950163242923739842d+01 | 2.374494685332581147594847d-23 | | | |
| 30 | 3.231616011586124766386857d+01 | 2.241758122024917515548811d-25 | | | |
| 31 | 3.491807237036103948331326d+01 | 1.534839876375531299089044d-27 | | | |
| 32 | 3.769867057907960166097761d+01 | 7.36122962689463277966997d-30 | | | |
| 33 | 4.068074489154412218196942d+01 | 2.366843765286919654623311d-32 | | | |
| 34 | 4.389396534830096841543090d+01 | 4.818092505080013539498314d-35 | | | |
| 35 | 4.7372388917067432439057d+01 | 5.74914902360275529087938d-38 | | | |
| 36 | 5.1190248621713445459225d+01 | 3.607636088813266495198225d-41 | | | |
| 37 | 5.54145324344415940651811d+01 | 1.0118626132998662354194640d-44 | | | |
| 38 | 6.01909328537880806174934d+01 | 1.92429817798657448786877d-53 | | | |
| 39 | 6.578709338537880806174934d+01 | 1.92429817798657448786877d-53 | | | |
| 40 | 7.289258967365214392215361d+01 | 2.1747719265510650760869381d-59 | | | |
| 1 | 1.015344947424061804384304d-01 | 1.232847930051943814144765d-01 | 1 | 1.52393576359589104988413d-01 | 1.796818593186600874766218d-01 |
| 2 | 2.284147334178625858839356d-01 | 5.2847407036178625858839356d-01 | 2 | 7.86940359221878650719508d-01 | 2.732916540455503351892099d-01 |
| 3 | 2.27750069895740155930766d-01 | 2.19747381032153581315779d-01 | 3 | 1.893320817998023473422134d+00 | 1.73589710522999496049943d-01 |
| 4 | 3.41631360175820408352211d+00 | 1.075084928066252351848804d-01 | 4 | 3.486516058083400613435484d+00 | 5.51247018608678786904260d-02 |
| 5 | 3.73667783867356059460599d+00 | 2.341631360175820408352211d+00 | 5 | 5.63020130715004652858104d+00 | 8.73275435005772035413113d-03 |
| 6 | 4.89384374387769008471691d+00 | 5.489384374387769008471691d+00 | 6 | 8.40334445960585327803506d+00 | 6.99032083359970766336534d-04 |
| 7 | 6.2665217778888734035796d+00 | 7.62665217778888734035796d+00 | 7 | 1.191484585682358354084089d+01 | 2.63106541578784987028615d-05 |
| 8 | 1.01791788471660548603816d+01 | 1.01791788471660548603816d+01 | 8 | 1.634917093881659687104107d+01 | 3.96167710278401916542072d-07 |
| 9 | 1.31882186929745007410421d+01 | 1.31882186929745007410421d+01 | 9 | 2.206577699881644169805588d+01 | 1.716431779996861134207648d-09 |
| 10 | 1.67116997011941540242587d+01 | 1.67116997011941540242587d+01 | 10 | 2.99893749004295179575889d+01 | 9.253522627688020692565010d-13 |
| 11 | 2.08333259708516009621035d+01 | 2.08333259708516009621035d+01 | | | |
| 12 | 2.568041606189490025072245d+01 | 2.568041606189490025072245d+01 | | | |
| 13 | 3.146379247226526717984342d+01 | 3.146379247226526717984342d+01 | | | |
| 14 | 3.858675798706670329976784d+01 | 3.858675798706670329976784d+01 | | | |
| 15 | 4.808199052039756280799851d+01 | 4.808199052039756280799851d+01 | | | |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|-----------------------------------|----|---------------------------------|-----------------------------------|
| 1 | 7.5968817660977430171720348-02 | 9.3580783579352771027591118-02 | 1 | 5.040450716718971766001156d-02 | 6.297273883006004939207042d-02 |
| 2 | 3.96895863442851782223058188-01 | 1.7915891070774495574995793378-01 | 2 | 2.6428935221086901107708105d-01 | 1.2939118241192700571048905d-01 |
| 3 | 6.53859561455675912482977d-01 | 1.8942324180609036734459918-01 | 3 | 6.4451025965584126768489001d-01 | 1.586859471413343740445347d-01 |
| 4 | 1.637285174134387424506506g+00 | 1.345729859686163499512049h-01 | 4 | 1.18600031469632592706762d+00 | 1.452835813677946735989001d-01 |
| 5 | 2.8113783607549400251569433d+00 | 6.23417223767455315464508d-02 | 5 | 1.886313672514671387996753d+00 | 1.027074423315998531968227d-01 |
| 6 | 4.107840574940400253281519d+00 | 2.3090720311433862166000433d-02 | 6 | 2.747535641374060256880807d+00 | 5.68107862373996210936446d-02 |
| 7 | 5.6704354580312393139073116d+00 | 5.8383350794478691941181718d-03 | 7 | 3.774828927519031700333358d+00 | 2.494340855333646793765132d-02 |
| 8 | 5.11845351087685760822423d+00 | 1.08444779437876606604086d+03 | 8 | 4.97369743806014829566442d+00 | 8.836762190655821430607667d-03 |
| 9 | 6.445797798701257747959729d+00 | 1.4785885411091833445280375d-04 | 9 | 6.348850551806358348114462d+00 | 2.5569957660784453233656236d-03 |
| 10 | 1.208934989255650121286601d+01 | 1.4638381919646267416975172d-05 | 10 | 7.90489016104312487968213d+00 | 6.077963923687135943529345d-04 |
| 11 | 1.486427773998474429293775d+01 | 1.033350455572096221030406d+06 | 11 | 9.645846866103479960271023d+00 | 1.187491249519852473745152575d-05 |
| 12 | 1.7998482895422597077647d+01 | 5.071744765163574669131819d-08 | 12 | 1.578030360829318445862711d+00 | 1.90183223155247475152575d-05 |
| 13 | 1.15280817636930704503338d+01 | 1.673310910186991301030526d-09 | 13 | 1.370781610222037674876666d+01 | 2.48476821815503984524717d-06 |
| 14 | 2.55007709685205040808777d+01 | 3.546943922631305717619101d-11 | 14 | 1.604298794934660600107228d+01 | 2.6311648916077563875865d-07 |
| 15 | 1.998144510924883682108873d+01 | 4.53989722472979703501348d-13 | 15 | 1.859266790556139440636720d+01 | 2.2399914208126010024002558d-08 |
| 16 | 3.5982181201220739773157d+01 | 3.212294519193455725204076d-15 | 16 | 2.136755310373746743174465d+01 | 1.5181476289178585684897113d-09 |
| 17 | 4.08816854635075808213746d+01 | 1.100172517046424514602555d-17 | 17 | 2.43802360927628935145060d+01 | 8.095065612140086577355995d-11 |
| 18 | 4.76882218954239646584355d+01 | 1.46657732613401431167121d-20 | 18 | 2.764563344020435593253567d+01 | 3.348133811654913404836031d-12 |
| 19 | 5.585923636727246285291701d+01 | 5.0364218571581813683430712d-24 | 19 | 3.11815641288576395893505d+01 | 1.055922194814784349630319d-13 |
| 20 | 6.65727603310332733193393d+01 | 1.578247292006709082172119d-28 | 20 | 3.500954416821835702361876d+01 | 2.487042653480436610984178d-15 |
| 1 | 6.062364769497890137808309d-02 | 7.531648952613585327528696d-02 | 21 | 3.915590445910245128426502d+01 | 4.264531155388917424181303d-17 |
| 2 | 3.174277094109304155168336d-01 | 1.505132065170069329643495d-01 | 22 | 4.365340987807029196125651d+01 | 5.156706731850473561357608d-19 |
| 3 | 7.7261645226774177040814321d-01 | 1.743536211305756610984920d-01 | 23 | 4.8543688773678601695649898d+01 | 4.2228713999464646464331533d-21 |
| 4 | 1.419597404207377884170178d+00 | 1.444496712076123342121589d-01 | 24 | 5.3881040322349570489754357d+01 | 2.221526785632768346122870d-23 |
| 5 | 2.257074769210105025728954d+00 | 8.850066821876197618736240d-02 | 25 | 5.973873453383896646064016d+01 | 6.9920101474001569991628816d-26 |
| 6 | 3.2905505507140251114510d+00 | 4.07154778442534628922120d-02 | 26 | 6.622019266883790357630170d+01 | 1.19106194415616292220822362d-32 |
| 7 | 4.528255269258609161093324d+00 | 1.43445491320910604349993d-02 | 27 | 7.348077923253389253963821d+01 | 9.4511426090873622220822362d-32 |
| 8 | 5.97810805954109275110909d+00 | 3.98024942331725811041528d-03 | 28 | 8.17763196244966616869358d+01 | 2.732206013733369156465250d-35 |
| 9 | 6.7471055558859555155076d+00 | 8.49884270547148638485438d-04 | 29 | 9.159594584745020595003182d+01 | 1.805881912022076050272723d-39 |
| 10 | 9.542836096350437709399811d+00 | 1.442746674296219893491800d-04 | 30 | 1.041969738854362618525074d+02 | 8.407655695306122618928261d-45 |
| 11 | 1.167439051683146213256351d+01 | 1.917032731124740410636517d-05 | | | |
| 12 | 1.4052850295877990419192d+01 | 1.976679061797751381319017d-06 | | | |
| 13 | 1.969166861549475963515763d+01 | 1.5632682615866071969284956d-09 | | | |
| 14 | 1.66071799848195177950952d+01 | 9.342307433824581026824956d-09 | | | |
| 15 | 2.28193174931833813275190d+01 | 4.140893799436666994664001d-11 | | | |
| 16 | 2.635268507196026964585240d+01 | 1.329847827277529658901807d-11 | | | |
| 17 | 3.023807161463066459607156d+01 | 3.004375882913553427259356d-13 | | | |
| 18 | 3.45147688174542451973149d+01 | 4.5972903810216804532585d-15 | | | |
| 19 | 4.9234188495374300450508670d+01 | 4.53385261841307347203013d-17 | | | |
| 20 | 4.466585119066577297326098d+01 | 2.69437167107158444248283d-19 | | | |
| 21 | 5.03083022074984405702d+01 | 8.775309548872633974186416d-22 | | | |
| 22 | 6.9084334202074984405702d+01 | 1.358697123603708901467366d-24 | | | |
| 23 | 6.45099943383722938598566d+01 | 7.92281227873793194447596d-28 | | | |
| 24 | 7.35751057464932128007488d+01 | 1.19371184690237910969420d-31 | | | |
| 25 | 8.53033847721682603367785d+01 | 1.260156803723669397820879d-36 | | | |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|--------------------------------|---------------------------------|----|----------------------------------|----------------------------------|
| 1 | 4.311625298153309211526857d-02 | 5.4081276183665114493388485d-02 | 1 | 3.7658983513035151149973936d-02 | 4.7375767595052520942159533g-02 |
| 2 | 2.62887609401827251345166d-01 | 1.132980179042340506649300d-01 | 2 | 1.977809118229622009106496d-01 | 1.006772333988791706955734d-01 |
| 3 | 5.5259810890601120106153d-01 | 1.44847613963340682447275d-01 | 3 | 4.83473053243434215629828185d-01 | 1.32540033169519575870770625d-01 |
| 4 | 1.01815676705616237029201d+00 | 1.41740181301287738841236d-01 | 4 | 8.91741488156338218597109102d-01 | 1.362391168368907590030325d-01 |
| 5 | 1.6203520032802915959818d+00 | 1.107165364642908093792160d-01 | 5 | 1.4466792804848484758466431g-01 | 1.14466792804848484758466431g-01 |
| 6 | 2.395858153302424039944485d+00 | 6.979113494487941340148455d-02 | 6 | 2.068094922841440056490332d+00 | 7.9497394049640497674718994g-02 |
| 7 | 3.238937999115084648666836d+00 | 3.56690469879333513448341d-02 | 7 | 2.8937593913639126961724309d+00 | 4.598356974097608412119543g-02 |
| 8 | 4.26242964754813830285623d+00 | 1.52373006774888231895240d-02 | 8 | 3.731302821451979548665389d+00 | 2.23927413675623209229413g-02 |
| 9 | 5.43649359043278300030186d+00 | 5.4183090113419990419347d-03 | 9 | 4.752253685066717435989631d+00 | 2.28903246682632300568865d-03 |
| 10 | 6.755631555533893552276307d+00 | 1.6218241954889569752439d-03 | 10 | 5.90278295707931818009500d+00 | 3.129012893551086808356773d-03 |
| 11 | 8.231308193070097907129711d+00 | 4.134302374066732176479030d-04 | 11 | 7.184965038111233879318970d+00 | 1.0213956508431490807327774d-03 |
| 12 | 9.863921381629021601287148d+00 | 8.9065027342986165658901317d-05 | 12 | 8.6009050277186681011273138d+00 | 2.728375611569368015564971g-04 |
| 13 | 1.165723147125795606757042d+01 | 1.623080942568875282868549d-05 | 13 | 1.0152953465273754859648863d+01 | 6.315191298167375471782637g-05 |
| 14 | 1.361560309644100894609941d+01 | 2.494504919140735608090232d-06 | 14 | 1.184380738838013314102885d+01 | 1.265079610751705295679473g-05 |
| 15 | 1.57440618489425784268446d+01 | 3.2021065711016400727810d-07 | 15 | 1.367654866317237693906730d+01 | 1.188781066365698513889048g-06 |
| 16 | 1.804836479976993178341478d+01 | 3.474413793382852242036223d-08 | 16 | 1.565466966119245398819520d+01 | 3.261807932626922299132494d-07 |
| 17 | 2.053509717295651878639006d+01 | 3.114606492830681521362181d-09 | 17 | 1.77821065375187751118109d+01 | 4.172991819655887985835368g-08 |
| 18 | 2.60871284315616790887993d+01 | 2.303688338606828212082483d-10 | 18 | 2.0063285110986150575638081d+01 | 4.565361171076153896111967g-09 |
| 19 | 2.91706539614440203763129d+01 | 1.394461372843585840076030d-11 | 19 | 2.503318011694342608796604d+01 | 4.251838224924662251469842g-10 |
| 20 | 3.247517870061158720483140d+01 | 6.84263270671271414842753d-13 | 20 | 2.510738889390165901884537d+01 | 3.3346680349760046046890528g-11 |
| 21 | 3.601296768522506242395725d+01 | 2.691827397875862077594352d-14 | 21 | 2.788222191570351236447547d+01 | 2.226601712132509295092974d-12 |
| 22 | 3.980031429400657081005284d+01 | 8.37937758544986178417711d-16 | 22 | 3.083481402912537211409430d+01 | 1.236137648479227116198721g-13 |
| 23 | 4.385608913702713387861264d+01 | 2.032459625013638463172266d-17 | 23 | 3.39732619440227184915277d+01 | 5.693594922486987208360422d-15 |
| 24 | 4.820298206837352982280554d+01 | 3.771380558774736860636679d-19 | 24 | 3.730679564325104645845420d+01 | 2.15637976733328100033252d-16 |
| 25 | 5.268666943217371464701207d+01 | 5.29545502421640963297276d-21 | 25 | 4.084599437980906621974558d+01 | 6.64692016981894857420818g-18 |
| 26 | 5.788750403693733393637191d+01 | 1.813237532209624065732971d-25 | 26 | 4.460306227111366605951678d+01 | 1.64781429408909393702100g-19 |
| 27 | 6.33030509973855434724711d+01 | 3.771641591408798097144057d-25 | 27 | 4.859218500015809060669545d+01 | 3.240208493416014892884862d-21 |
| 28 | 6.91206260822987283425353d+01 | 1.813237532209624065732971d-25 | 28 | 5.282999911562655405839829d+01 | 4.972204516681383443848177g-23 |
| 29 | 7.50750789516554961168219d+01 | 1.0133773271527017077565712d-30 | 29 | 5.7336222119589304025236735d+01 | 5.840568830342964253659090d-25 |
| 30 | 8.104510062693188259480025d+01 | 4.36473226683940282431307d-39 | 30 | 6.21345098695948493309718827d+01 | 7.131335548386617578137483d-27 |
| 31 | 8.734952960716686282352094d+01 | 6.826067280804306595784776d-43 | 31 | 6.723672079701946067450d+01 | 3.278102293760797692173300d-29 |
| 32 | 9.394592960716686282352094d+01 | 6.826067280804306595784776d-43 | 32 | 7.272944281610606452892467d+01 | 1.47044301511504417228991777g-31 |
| 33 | 1.09835267801684258227396d+02 | 4.31147701687591679898309d-47 | 33 | 8.4947459044253057250275d+01 | 8.4671569391270916622018888g-37 |
| 34 | 1.23209768386634631476228d+02 | 4.9236074615802222862991821d-53 | 34 | 9.182410240282397304668716d+01 | 9.4967182836975621496609150g-40 |
| 35 | 1.23209768386634631476228d+02 | 4.9236074615802222862991821d-53 | 35 | 9.935501985187536026882213d+01 | 5.60603326700028658875738g-43 |
| | | | 36 | 1.077066364642577295808418d+02 | 1.479440472242832156695300g-46 |
| | | | 37 | 1.175649068487065035429770d+02 | 1.3355446956120208482207107g-50 |
| | | | 38 | 1.282360087672191006539915d+02 | 2.480418248656812303549148g-55 |
| | | | 40 | 1.423141962304817578670821d+02 | 2.609693350887971079543663g-61 |

TABLE 8. Nodes and weights for n-point Gaussian quadrature with respect to the weight function $\varphi_2^t(t) = (1/(e^t + 1))^2$ on $(0, \infty)$, $n=5(5)40$.

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|--------------------------------|---------------------------------|----|---------------------------------|---------------------------------|
| 1 | 1.604529491791710058718722d-01 | 8.4321805151139803615070134d-02 | 1 | 3.924952811040474293220020d-02 | 2.416707312744937085105696d-02 |
| 2 | 8.190824785378458206624539d-01 | 8.432196783413862269761412d-02 | 2 | 0.055355549600076264190848d-01 | 4.659417540479442227430852d-02 |
| 3 | 1.965204786152459839458304d+00 | 2.127617454306623128268d-02 | 3 | 5.00130348928206271023259d-01 | 5.9862029766570718258766096d-02 |
| 4 | 3.7104481462348560404553d+00 | 1.22241570858326620671724d-03 | 4 | 9.17605793669916371879483d-01 | 2.8900719010505601853864306d-02 |
| 5 | 6.471896055974964518244494d+00 | 8.570962759163143908037842d-06 | 5 | 1.4544746910310019022132960d+00 | 2.1377650100704494293904613d-02 |
| 6 | 1.604529491791710058718722d-01 | 8.4321805151139803615070134d-02 | 6 | 2.11178934294953261215547d+00 | 8.38153260357980324570602d-03 |
| 7 | 8.190824785378458206624539d-01 | 8.432196783413862269761412d-02 | 7 | 8.89541304910410684527947d+00 | 2.331066066159820017916186d-03 |
| 8 | 1.965204786152459839458304d+00 | 2.127617454306623128268d-02 | 8 | 3.81417651919766275246494d+00 | 4.608387287157066434561513d-04 |
| 9 | 3.7104481462348560404553d+00 | 1.22241570858326620671724d-03 | 9 | 9.1778850114680006296209477d+00 | 6.505169495024564521387378d-05 |
| 10 | 6.471896055974964518244494d+00 | 8.570962759163143908037842d-06 | 10 | 6.0967344291500465811180974d+00 | 6.553140567734092483362748d-06 |
| 11 | 1.604529491791710058718722d-01 | 8.4321805151139803615070134d-02 | 11 | 4.482076021871598345796071d+00 | 4.66489624438292296114354d-07 |
| 12 | 8.190824785378458206624539d-01 | 8.432196783413862269761412d-02 | 12 | 9.047749846881603289844454d+00 | 2.29925953989579246371020d-08 |
| 13 | 1.965204786152459839458304d+00 | 2.127617454306623128268d-02 | 13 | 1.0811583924048024190754d+01 | 7.60410633980898492402996d-10 |
| 14 | 3.7104481462348560404553d+00 | 1.22241570858326620671724d-03 | 14 | 1.2797247354049867788128895d+01 | 1.614353598984839206853616d-11 |
| 15 | 6.471896055974964518244494d+00 | 8.570962759163143908037842d-06 | 15 | 1.50370789630846995296662d+01 | 2.068572187912318786856282d-13 |
| 16 | 1.604529491791710058718722d-01 | 8.4321805151139803615070134d-02 | 16 | 1.757055400774110036730398d+01 | 1.464890075954622384258436d-15 |
| 17 | 8.190824785378458206624539d-01 | 8.432196783413862269761412d-02 | 17 | 2.048649349428092491713358d+01 | 5.02041527897072381901390d-18 |
| 18 | 1.965204786152459839458304d+00 | 2.127617454306623128268d-02 | 18 | 2.387965202919089107679167d+01 | 6.69608318778697668822764d-21 |
| 19 | 3.7104481462348560404553d+00 | 1.22241570858326620671724d-03 | 19 | 2.794748633178220721348314d+01 | 2.300592277356243359916381d-24 |
| 20 | 6.471896055974964518244494d+00 | 8.570962759163143908037842d-06 | 20 | 3.333135280393978452397030d+01 | 7.2123280409326866401861752d-29 |
| 1 | 7.98346830245329709582928d-02 | 4.703179911683962235679340d-02 | 1 | 3.1210872795656392754264106d-02 | 1.938317446929659153153385d-02 |
| 2 | 1.42978309860046558526865d-01 | 7.3090737918959724194580263d-02 | 2 | 1.637077318295095640375901d-01 | 3.89207498680069902464612d-02 |
| 3 | 9.972074541374701092323964d-01 | 5.100212649936035383211395d-02 | 3 | 9.9327382431304713636465d-01 | 4.609821148082054034743090d-02 |
| 4 | 1.819629424579399354812273d+00 | 1.839604456420988348692300d-02 | 4 | 7.3446994287773035077230955d-01 | 4.033609588227719026748055d-02 |
| 5 | 2.899502075298030840512102d+00 | 3.32643847329293276233729d-03 | 5 | 1.66014691015885655368099d+00 | 2.70458690228823885489638d-02 |
| 6 | 4.281683551905928417611517d+00 | 2.86592856250414107867067d-04 | 6 | 1.6929567401386681352203814d+00 | 1.38841935850520583834336d-02 |
| 7 | 6.03104227594545059629841d+00 | 1.126824926192691510791395d-05 | 7 | 2.317160953037016363804702d+00 | 5.42537404642233668348211d-03 |
| 8 | 8.243894080384019922442969d+00 | 1.721313632867631484993028d-07 | 8 | 3.042880542520996863083933d+00 | 1.613001621467984217799249d-03 |
| 9 | 1.109973843025427242081392d+01 | 7.50363745187767562724668d-10 | 9 | 3.875454262158331259834461d+00 | 3.667200049033622934479004d-04 |
| 10 | 1.506001407766426001569716d+01 | 4.059020593697217205228315d-13 | 10 | 4.820782179516603075897624d+00 | 6.415233422725923937450751d-05 |
| 1 | 5.273098615330599660115266d-02 | 3.199950283657757779105561d-02 | 11 | 5.88417242807130219029825d+00 | 8.56102096131747272497028d-06 |
| 2 | 2.75290025324698034515084d-01 | 5.7530499190879242238140d-02 | 12 | 7.07158470294741872559716d+00 | 9.03543416028246224215103d-07 |
| 3 | 6.67268434430927668173886d-01 | 5.445158735423293470726859d-02 | 13 | 8.38970738950290159995621d+00 | 7.130952202880217859210855d-08 |
| 4 | 1.220310702187146323995719d+00 | 3.2831667174622500901151d-02 | 14 | 9.84656164056936740373796d+00 | 4.2838905634545009761509094d-09 |
| 5 | 1.932926694161233140542906d+00 | 1.270005095996068213496465d-02 | 15 | 1.14519854834155055714438d+01 | 1.901726225089100567350904d-10 |
| 6 | 8.1339630587587865412622d+00 | 3.105891726070511946055869d-03 | 16 | 1.3218187432993528851416319d+01 | 6.11400480113598664723492d-12 |
| 7 | 3.88024865780182781788385d+00 | 4.768824086086144624062760d-04 | 17 | 1.51605770397670161910319d+01 | 1.382392492976275098901009d-13 |
| 8 | 5.152144519788616102209257d+00 | 4.5755944877671577986451115d-05 | 18 | 1.729855880256453413925513d+01 | 2.11668626562184291264418d-15 |
| 9 | 6.53033371606440823684761d+00 | 2.696697518371701989623722d-06 | 19 | 1.965802540020038686224081d+01 | 2.088557064016495216163751d-17 |
| 10 | 8.412372490418714695071481d+00 | 3.73406009504570280075849d-08 | 20 | 2.227365395799281169060772d+01 | 1.24171523227123205918812d-19 |
| 11 | 1.04716751022543949469898d+01 | 1.787638612691403264273100d-09 | 21 | 2.519456114957459420610655d+01 | 4.045603964017561695252695d-22 |
| 12 | 1.289422648440808516574065d+01 | 6.62793568090261409830554d-11 | 22 | 3.84945792477473792300926d+01 | 6.26591966590792570618000d-25 |
| 13 | 1.578521029458619892228622d+01 | 1.86428254490246287751204d-14 | 23 | 5.654706026006847238027336d-28 | 3.654706026006847238027336d-28 |
| 14 | 1.934613688096899735302132d+01 | 6.3075741619065974039630493d-17 | 24 | 3.66289130274334031622705d+01 | 5.1648016999128899517798675d-32 |
| 15 | 2.409333027978803271430822d+01 | 6.8151698622193346861273148d-21 | 25 | 4.269173563933678418432189d+01 | 5.815756368466568321928336d-37 |

| n | zero(n) | weight(n) | n | zero(n) | weight(n) |
|----|---------------------------------|---------------------------------|----|----------------------------------|---------------------------------|
| 1 | 2.588228026153195351280165g-02 | 1.6165071825146059209704888d-02 | 1 | 2.209517353312559018393453d-02 | 1.385509782567028328888801d-02 |
| 2 | 1.358970128096548511990032g-01 | 3.332946508832128694035437g-02 | 2 | 1.16092353182779603656649068d-01 | 2.910186085756955108337914d-02 |
| 3 | 3.320173887347754885172253g-01 | 4.1601599034331062566675988g-02 | 3 | 2.839497114079001462920904d-01 | 3.767125662737508238184096d-02 |
| 4 | 6.117664872306454202005053g-01 | 3.965503271795018606187601g-02 | 4 | 5.2387804899824142219693625d-01 | 3.808511924939265315256491d-02 |
| 5 | 7.26426942520035464211365g-01 | 3.016995138822233318057027g-02 | 5 | 8.3392551387565028861387341d-01 | 3.159423515369759357476700d-02 |
| 6 | 1.413178109250486424850472g+00 | 1.8400568440119432390556977g-02 | 6 | 1.216235395780556325638d+00 | 2.16919239459257303432801d-02 |
| 7 | 1.933614529836276765388454g+00 | 8.95499539701409203305170g-03 | 7 | 1.659585962689792602368901d+00 | 1.229182924652162332534076d-02 |
| 8 | 2.53591939587678716798194g+00 | 3.468879457265493348883784g-03 | 8 | 2.175601793820211723899787d+00 | 5.72951971273930995197866d-03 |
| 9 | 3.223375709860051266815000g+00 | 1.072288991340456752464773g-03 | 9 | 2.7625411846927225901443d+00 | 2.197511366989483791845110d-03 |
| 10 | 3.999502550603977608762357g+00 | 2.660766952535796042712859g-04 | 10 | 3.4228214354661378586716038d+00 | 6.963446621830641930403833d-04 |
| 11 | 4.867898736865285672752628g+00 | 5.331973076773383556600920g-05 | 11 | 4.15896841549869236133140d+00 | 1.833763514589202005709486d-05 |
| 12 | 5.832008899721497378146546g+00 | 8.659633039141047790922258g-06 | 12 | 4.973388778795037163605895d+00 | 4.0346222803614277716897996d-06 |
| 13 | 6.895354370250960953383436g+00 | 1.139882075189906046379063g-06 | 13 | 5.868375123672057138877614d+00 | 7.441006064818274291542437d-06 |
| 14 | 8.061806574333910161403596g+00 | 1.211959430750159479847326g-07 | 14 | 6.846240724475338934397373d+00 | 1.151215042659801644677685d-06 |
| 15 | 9.335828698760777552390631g+00 | 1.034209134448379956053783g-08 | 15 | 7.90979491316016049451254d+00 | 1.491678517027043066952768d-07 |
| 16 | 1.072267236193860519614745g+01 | 7.01981165085849055330072g-10 | 16 | 9.06089648924317327221923d+00 | 1.61298848764983345522804d-08 |
| 17 | 1.222656200324725315075816g+01 | 3.747007125318538505120569g-11 | 17 | 1.030371790303421471852196d+01 | 1.447998092006319888134761d-09 |
| 18 | 1.38609069140990513026848g+01 | 1.550978102103294739827108g-12 | 18 | 1.164165067583903320574930d+01 | 6.494140398649303989034168d-10 |
| 19 | 1.582859208608491274485936g+01 | 4.894411072621642158936658g-14 | 19 | 1.307898648887204246868864d+01 | 1.61298848764983345522804d-08 |
| 20 | 1.79423511499739486882139g+01 | 1.153364650960328911063384g-15 | 20 | 1.462068995383846331393089d+01 | 3.188530034461802930509219d-13 |
| 21 | 1.961533869798864258410272g+01 | 1.978482810068836172759944g-17 | 21 | 1.627252845440090999338039d+01 | 1.254928244912098679619737d-14 |
| 22 | 2.186392841393176563302508g+01 | 2.393220142718205832811165g-19 | 22 | 1.80412403194728877722256d+01 | 3.907984678775733310134428d-16 |
| 23 | 2.43089281488876125844465g+01 | 1.9604024201180923932375g-21 | 23 | 1.99347586235038537310103d+01 | 9.482125875728669153175866d-18 |
| 24 | 2.697748276439499405031559g+01 | 1.031569857475096873755767g-23 | 24 | 2.196251296860919371026086d+01 | 1.759972595753066567594337d-19 |
| 25 | 2.99062236144477597172478g+01 | 3.247468421127852167296623g-26 | 25 | 2.413584403290844614121713d+01 | 2.444267088354505098081064d-21 |
| 26 | 3.31468584115258519065391g+01 | 5.533015659416425410188426g-29 | 26 | 2.646858674018324772435680d+01 | 2.4723238375252728507901d-23 |
| 27 | 3.67770694804893534602729g+01 | 4.391245464794171884360724g-32 | 27 | 2.897791495629123800011667d+01 | 1.761217075520568098780914d-25 |
| 28 | 4.0924759649856742749094511g+01 | 1.2696557442341095592211566g-35 | 28 | 3.16856004218517800578252d+01 | 8.468537554134550024146155d-28 |
| 29 | 4.5834499601692553292552g+01 | 8.39318225643705060703827g-40 | 29 | 3.46200401236171561693707d+01 | 2.600535332910754481813353d-30 |
| 30 | 5.21349414164747735220715g+01 | 3.908198331086700931304998g-45 | 30 | 3.71347946503710477748019d+01 | 4.600177025142320119300238d-33 |
| | | | 31 | 4.133789220502967573840496d+01 | 6.60017616805595687614684d-36 |
| | | | 32 | 4.526363632708737745084860d+01 | 2.039541668797193464319653d-39 |
| | | | 33 | 4.9708550221719986586231819g+01 | 3.18999832836126041727996d-43 |
| | | | 34 | 5.495000012113710461966331d+01 | 1.08032044837011329592171d-47 |
| | | | 35 | 6.1638571205992401562023058d+01 | 2.301390892483800754626453d-53 |

| n | zero(n) | weight(n) |
|----|----------------------------------|----------------------------------|
| 1 | 1.92672519829311655339086514d-02 | 1.211780827808369378801333d-02 |
| 2 | 1.0128338604178297797357332d-01 | 2.5804215233398347950311401d-02 |
| 3 | 2.479275312111687191542970d-01 | 3.43053128489673801122604d-02 |
| 4 | 4.5786932336361894973668477d-01 | 3.61970384324254204049180008d-02 |
| 5 | 7.295702609357231543006807d-01 | 3.1966508586652573934290432d-02 |
| 6 | 1.061724229582277059602416d+00 | 2.391184506299137961529284d-02 |
| 7 | 1.435660472531233979530630d+00 | 1.51378380810486642760602d-02 |
| 8 | 1.905580131294302039598793d+00 | 8.083881040260133142573799d-03 |
| 9 | 2.418525074360187850665731d+00 | 3.637222518000239045330928d-03 |
| 10 | 2.994111898876383291878145d+00 | 1.381853805685380144068182d-03 |
| 11 | 3.634187557582421986089124d+00 | 4.453701593806042173026581d-04 |
| 12 | 4.340572570642393026236902d+00 | 1.224284277624888380716307d-04 |
| 13 | 5.114964255622428573537631d+00 | 2.883436613217079876345959d-05 |
| 14 | 5.85897149681102234334175d+00 | 5.834767889841534044096909d-06 |
| 15 | 6.874211009052206279307203d+00 | 1.015332472988955550120880d-06 |
| 16 | 7.86240798979230875305535d+00 | 1.518146070886693702017363d-07 |
| 17 | 8.925475328662601173521146d+00 | 1.94617060066721905994366d-08 |
| 18 | 1.006556967918263552898532d+01 | 2.131965090285474637846248d-09 |
| 19 | 1.128513345719231016163977d+01 | 1.987390987008604596390884d-10 |
| 20 | 1.258693320218243576313126d+01 | 1.568563681380054200966251d-11 |
| 21 | 1.397410230638119527324308d+01 | 1.042048327230607061229912d-12 |
| 22 | 1.545019350035196560499432d+01 | 5.787690017218026243761970d-14 |
| 23 | 1.701924510437177809608526d+01 | 1.0103283286016433434191684d-16 |
| 24 | 1.868586505633208750235391d+01 | 1.0103283286016433434191684d-16 |
| 25 | 2.045533786280068563642717d+01 | 3.115097616272839234220647d-18 |
| 26 | 2.233376175544780240654170d+01 | 7.724315980258908140632105d-20 |
| 27 | 2.432822664401331944393443d+01 | 1.51919133450402533089767d-21 |
| 28 | 2.64470485111702531441641d+01 | 2.3316624386857378743465974d-23 |
| 29 | 2.870008382379384117225437d+01 | 2.739303773429876347396108d-25 |
| 30 | 3.10991604256174427212172d+01 | 2.407001778716015914963974d-27 |
| 31 | 3.36586831482340639512617d+01 | 1.537882591464535189377425d-29 |
| 32 | 3.639651079432945101265431d+01 | 6.89919212739192509977609d-32 |
| 33 | 3.93352724058536520919229d+01 | 2.079121967974517981322435d-34 |
| 34 | 4.250443113070104506108465d+01 | 3.973502203886383104633128d-37 |
| 35 | 4.594370178026164200683050d+01 | 4.457046053249068157458682d-40 |
| 36 | 4.970912124445061578754660d+01 | 2.631262925830146845010222d-43 |
| 37 | 5.388489249505677871197940d+01 | 6.94446688409045677007158d-47 |
| 38 | 5.860978425774107840639148d+01 | 6.269473904053579229201078d-51 |
| 39 | 6.414950868827129965198764d+01 | 1.1644669609911003577649664d-55 |
| 40 | 7.118856642362202733156693d+01 | 1.225249298874746097459912d-61 |