

TABLES OF ALPERT QUADRATURE NODES AND WEIGHTS

2 nd -order Alpert Quadrature Rule for integrals of the form $\int_0^1 f(x) + g(x) \log(x) dx$, with $a = 1$	
NODES	WEIGHTS
1.591549430918953e-01	5.000000000000000e-01

6 th -order Alpert Quadrature Rule for integrals of the form $\int_0^1 f(x) + g(x) \log(x) dx$, with $a = 3$	
NODES	WEIGHTS
4.004884194926570e-03	1.671879691147102e-02
7.745655373336686e-02	1.636958371447360e-01
3.972849993523248e-01	4.981856569770637e-01
1.075673352915104e+00	8.372266245578912e+00
2.003796927111872e+00	9.841730844088381e+00

10 th -order Alpert Quadrature Rule for integrals of the form $\int_0^1 f(x) + g(x) \log(x) dx$, with $a = 6$	
NODES	WEIGHTS
1.175089381227308e-03	4.560746882084207e-03
1.877034129831289e-02	3.810606322384757e-02
9.686468391426860e-02	1.293864997289512e-01
3.004818668002884e-01	2.884360381408835e-01
6.901331557173356e-01	4.958111914344961e-01
1.293695738083659e+00	7.077154600594529e-01
2.090187729798780e+00	8.741924365285083e-01
3.016719313149212e+00	9.661361986515218e-01
4.001369747872486e+00	9.957887866078700e-01
5.000025661793423e+00	9.998665787423845e-01

16 th -order Alpert Quadrature Rule for integrals of the form $\int_0^1 f(x) + g(x) \log(x) dx$, with $a = 10$	
NODES	WEIGHTS
8.371529832014113e-04	3.190919086626234e-03
1.239382725542637e-02	2.423621380426338e-02
6.009290785739468e-02	7.740135521653088e-02
1.805991249601928e-01	1.704889420286369e-01
4.142832599028031e-01	3.029123478511309e-01
7.964747731112430e-01	4.652220834914617e-01
1.348993882467059e+00	6.401489637096768e-01
2.073471660264359e+00	8.051212946181061e-01
2.947904939031494e+00	9.362411945698647e-01
3.928129252248612e+00	1.014359775369075e+00
4.957203086563112e+00	1.035167721053657e+00
5.986360113977494e+00	1.020308624984610e+00
6.997957704791519e+00	1.004798397441514e+00
7.999888757524622e+00	1.000395017352309e+00
8.999998754306120e+00	1.000007149422537e+00