

Nuclear Binding Energies for Various Isotopes

Source: <https://www.physicsclassroom.com/Chemistry-Tutorial/Reference-Tables/Nuclear-Binding-Energies>

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Symbol	Atomic #	Mass #	Mass of Atom amu	Δm amu	$\Delta m/\text{nucleon}$ amu/nucleon	BE/nucleon MeV/nucleon
H	1	1	1.007825032	0.0000000	0.000000000	0.000
D	1	2	2.014101778	-0.0023882	-0.001194092	1.112
T	1	3	3.016049278	-0.0091056	-0.003035200	2.827
He	2	3	3.01602932	-0.0082857	-0.002761896	2.573
	2	4	4.002603254	-0.0303767	-0.007594168	7.074
Li	3	6	6.015122887	-0.0343470	-0.005724500	5.332
	3	7	7.016003437	-0.0421314	-0.006018767	5.606
Be	4	9	9.012183065	-0.0624417	-0.006937967	6.463
B	5	10	10.01293695	-0.0695129	-0.006951286	6.475
	5	11	11.00930536	-0.0818094	-0.007437215	6.928
C	6	12	12	-0.0989398	-0.008244981	7.680
	6	13	13.00335484	-0.1042499	-0.008019220	7.470
	6	14	14.00324199	-0.1130276	-0.008073401	7.520
N	7	14	14.003074	-0.1123557	-0.008025409	7.476
	7	15	15.0001089	-0.1239858	-0.008265717	7.699
O	8	16	15.99491462	-0.1370051	-0.008562817	7.976

	8	17	16.99913176	-0.1414529	-0.008320756	7.751
	8	18	17.99915961	-0.1500899	-0.008338329	7.767
F	9	19	18.99840316	-0.1586714	-0.008351127	7.779
Ne	10	20	19.99244018	-0.1724594	-0.008622972	8.032
	10	21	20.99384669	-0.1797179	-0.008557993	7.972
	10	22	21.99138511	-0.1908443	-0.008674743	8.080
Na	11	23	22.98976928	-0.2002852	-0.008708053	8.112
Mg	12	24	23.9850417	-0.2128379	-0.008868244	8.261
	12	25	24.98583698	-0.2207075	-0.008828300	8.224
	12	26	25.98259297	-0.2326164	-0.008946785	8.334
Al	13	27	26.98153853	-0.2414959	-0.008944292	8.332
Si	14	28	27.97692653	-0.2539329	-0.009069034	8.448
	14	29	28.97649466	-0.2630297	-0.009069990	8.449
	14	30	29.97377014	-0.2744192	-0.009147306	8.521
P	15	31	30.973762	-0.2822524	-0.009104915	8.481
S	16	32	31.97207117	-0.2917682	-0.009117757	8.493
	16	33	32.97145891	-0.3010454	-0.009122588	8.498
	16	34	33.967867	-0.3133022	-0.009214771	8.584
	16	36	35.96708071	-0.3314184	-0.009206065	8.575
Cl	17	35	34.96885268	-0.3201416	-0.009146903	8.520
	17	37	36.9659026	-0.3404215	-0.009200581	8.570

Ar	18	36	35.96754511	-0.3292742	-0.009146506	8.520
	18	38	37.96273211	-0.3514170	-0.009247817	8.614
	18	40	39.96238312	-0.3690959	-0.009227397	8.595
K	19	39	38.96370649	-0.3582677	-0.009186352	8.557
	19	40	39.96399817	-0.3666410	-0.009166024	8.538
	19	41	40.96182526	-0.3774788	-0.009206799	8.576
Ca	20	40	39.96259086	-0.3672084	-0.009180210	8.551
	20	42	41.95861783	-0.3885112	-0.009250268	8.617
	20	43	42.95876644	-0.3970276	-0.009233199	8.601
	20	44	43.95548156	-0.4089774	-0.009294940	8.658
	20	46	45.953689	-0.4280997	-0.009306516	8.669
	20	48	47.95252276	-0.4465958	-0.009304079	8.667
Sc	21	45	44.95590828	-0.4163757	-0.009252793	8.619
Ti	22	46	45.95262772	-0.4274813	-0.009293071	8.656
	22	47	46.95175879	-0.4370151	-0.009298194	8.661
	22	48	47.94794198	-0.4494969	-0.009364518	8.723
	22	49	48.94786568	-0.4582381	-0.009351797	8.711
	22	50	49.94478689	-0.4699818	-0.009399636	8.756
V	23	50	49.94715601	-0.4667728	-0.009335456	8.696
	23	51	50.94395704	-0.4786367	-0.009385033	8.742
Cr	24	50	49.94604183	-0.4670471	-0.009340942	8.701
	24	52	51.94050623	-0.4899125	-0.009421395	8.776
	24	53	52.94064815	-0.4984355	-0.009404444	8.760
	24	54	53.93887916	-0.5088694	-0.009423508	8.778

Mn	25	55	54.93804391	-0.5175297	-0.009409631	8.765
Fe	26	54	53.93960899	-0.5064599	-0.009378886	8.736
	26	56	55.93493633	-0.5284624	-0.009436828	8.790
	26	57	56.93539284	-0.5366708	-0.009415276	8.770
	26	58	57.93327443	-0.5474541	-0.009438864	8.792
Co	27	59	58.93319429	-0.5553593	-0.009412869	8.768
Ni	28	58	57.93534241	-0.5437064	-0.009374248	8.732
	28	60	59.93078588	-0.5655927	-0.009426545	8.781
	28	61	60.93105557	-0.5739880	-0.009409639	8.765
	28	62	61.92834537	-0.5853631	-0.009441340	8.795
	28	64	63.92796682	-0.6030715	-0.009422991	8.777
Cu	29	63	62.92959772	-0.5919358	-0.009395806	8.752
	29	65	64.9277897	-0.6110736	-0.009401133	8.757
Zn	30	64	63.92914201	-0.6002165	-0.009378383	8.736
	30	66	65.92603381	-0.6206546	-0.009403857	8.760
	30	67	66.92712775	-0.6282255	-0.009376500	8.734
	30	68	67.92484455	-0.6391736	-0.009399612	8.756
	30	70	69.9253192	-0.6560288	-0.009371840	8.730
Ga	31	69	68.9255735	-0.6462697	-0.009366228	8.725
	31	71	70.92470258	-0.6644705	-0.009358739	8.718
Ge	32	70	69.92424875	-0.6554195	-0.009363136	8.722
	32	72	71.92207583	-0.6749223	-0.009373921	8.732
	32	73	72.92345896	-0.6822041	-0.009345261	8.705
	32	74	73.92117776	-0.6931502	-0.009366894	8.725
	32	76	75.92140273	-0.7102551	-0.009345461	8.705

As	33	75	74.92159457	-0.7005584	-0.009340779	8.701
Se	34	74	73.92247593	-0.6901723	-0.009326652	8.688
	34	76	75.9192137	-0.7107643	-0.009352162	8.711
	34	77	76.91991415	-0.7187288	-0.009334140	8.695
	34	78	77.91730928	-0.7299986	-0.009358956	8.718
	34	80	79.9165218	-0.7481159	-0.009351449	8.711
	34	82	81.9166995	-0.7652680	-0.009332537	8.693
Br	35	79	78.9183376	-0.7367953	-0.009326523	8.688
	35	81	80.9162897	-0.7561731	-0.009335470	8.696
Kr	36	78	77.92036494	-0.7252632	-0.009298246	8.661
	36	80	79.91637808	-0.7465799	-0.009332249	8.693
	36	82	81.91348273	-0.7668051	-0.009351281	8.711
	36	83	82.91412716	-0.7748256	-0.009335248	8.696
	36	84	83.91149773	-0.7861199	-0.009358570	8.717
	36	86	85.91061063	-0.8043368	-0.009352754	8.712
Rb	37	85	84.91178974	-0.7936529	-0.009337093	8.697
	37	87	86.90918053	-0.8135920	-0.009351632	8.711
Sr	38	84	83.9134191	-0.7825188	-0.009315700	8.678
	38	86	85.9092606	-0.8040071	-0.009348920	8.708
	38	87	86.9088775	-0.8130551	-0.009345461	8.705
	38	88	87.9056125	-0.8249851	-0.009374830	8.733
Y	39	89	88.9058403	-0.8325823	-0.009354857	8.714
Zr	40	90	89.9046977	-0.8415500	-0.009350555	8.710
	40	91	90.9056396	-0.8492730	-0.009332670	8.693
	40	92	91.9050347	-0.8585428	-0.009331987	8.693

	40	94	93.9063108	-0.8745965	-0.009304218	8.667
	40	96	95.9082714	-0.8899657	-0.009270477	8.635
Nb	41	93	92.906373	-0.8650295	-0.009301393	8.664
Mo	42	92	91.90680796	-0.8550898	-0.009294454	8.658
	42	94	93.9050849	-0.8741427	-0.009299390	8.662
	42	95	94.90583877	-0.8820537	-0.009284776	8.649
	42	96	95.90467612	-0.8918813	-0.009290430	8.654
	42	97	96.90601812	-0.8992042	-0.009270146	8.635
	42	98	97.90540482	-0.9084824	-0.009270229	8.635
	42	100	99.9074718	-0.9237453	-0.009237453	8.605
Tc	43	97	96.9063667	-0.8980158	-0.009257894	8.624
	43	98	97.9072124	-0.9058350	-0.009243214	8.610
	43	99	98.9062508	-0.9154615	-0.009247086	8.614
Ru	44	96	95.90759025	-0.8872874	-0.009242577	8.609
	44	98	97.9052868	-0.9069207	-0.009254293	8.620
	44	99	98.9059341	-0.9149383	-0.009241801	8.609
	44	100	99.9042143	-0.9253230	-0.009253230	8.619
	44	101	100.9055769	-0.9326253	-0.009233914	8.601
	44	102	101.9043441	-0.9425231	-0.009240422	8.607
	44	104	103.9054275	-0.9587695	-0.009218937	8.587
Rh	45	103	102.905498	-0.9491942	-0.009215478	8.584
Pd	46	102	101.9056022	-0.9395852	-0.009211620	8.581
	46	104	103.9040305	-0.9584868	-0.009216219	8.585
	46	105	104.9050796	-0.9661026	-0.009200977	8.571
	46	106	105.9034804	-0.9763667	-0.009211006	8.580
	46	108	107.9038916	-0.9932853	-0.009197086	8.567
	46	110	109.9051722	-1.0093346	-0.009175769	8.547

Ag	47	107	106.9050916	-0.9825805	-0.009182996	8.554
	47	109	108.9047553	-1.0002467	-0.009176575	8.548
Cd	48	106	105.9064599	-0.9717075	-0.009167051	8.539
	48	108	107.9041834	-0.9913138	-0.009178831	8.550
	48	110	109.9030066	-1.0098204	-0.009180185	8.551
	48	111	110.9041829	-1.0173091	-0.009164946	8.537
	48	112	111.9027629	-1.0273940	-0.009173160	8.545
	48	113	112.9044081	-1.0344136	-0.009154103	8.527
	48	114	113.9033651	-1.0441216	-0.009158961	8.532
	48	116	115.9047632	-1.0600534	-0.009138391	8.512
In	49	113	112.9040618	-1.0339201	-0.009149735	8.523
	49	115	114.9038788	-1.0514329	-0.009142895	8.517
Sn	50	112	111.9048239	-1.0236532	-0.009139761	8.514
	50	114	113.9027827	-1.0430242	-0.009149335	8.523
	50	115	114.9033447	-1.0511272	-0.009140236	8.514
	50	116	115.9017428	-1.0613940	-0.009149948	8.523
	50	117	116.902954	-1.0688477	-0.009135450	8.510
	50	118	117.9016066	-1.0788600	-0.009142882	8.517
	50	119	118.9033112	-1.0858203	-0.009124541	8.499
	50	120	119.9022016	-1.0955948	-0.009129957	8.505
	50	122	121.9034438	-1.1116825	-0.009112151	8.488
	50	124	123.9052766	-1.1271795	-0.009090157	8.467
Sb	51	121	120.903812	-1.1018095	-0.009105863	8.482
	51	123	122.9042132	-1.1187381	-0.009095432	8.472
Te	52	120	119.9040593	-1.0920574	-0.009100478	8.477
	52	122	121.9030435	-1.1104030	-0.009101664	8.478
	52	123	122.9042698	-1.1178416	-0.009088143	8.466
	52	124	123.9028171	-1.1279593	-0.009096446	8.473
	52	125	124.9044299	-1.1350114	-0.009080091	8.458

	52	126	125.9033109	-1.1447953	-0.009085677	8.463
	52	128	127.9044613	-1.1609747	-0.009070115	8.449
	52	130	129.9062227	-1.1765431	-0.009050332	8.430
I	53	127	126.9044719	-1.1514593	-0.009066609	8.445
Xe	54	124	123.905892	-1.1232046	-0.009058102	8.438
	54	126	125.9042983	-1.1421281	-0.009064509	8.444
	54	128	127.903531	-1.1602253	-0.009064260	8.443
	54	129	128.9047809	-1.1676403	-0.009051475	8.431
	54	130	129.9035093	-1.1775768	-0.009058283	8.438
	54	131	130.9050841	-1.1846670	-0.009043259	8.424
	54	132	131.9041551	-1.1942609	-0.009047431	8.428
	54	134	133.9053947	-1.2103511	-0.009032471	8.414
	54	136	135.9072145	-1.2258611	-0.009013685	8.396
Cs	55	133	132.905452	-1.2007890	-0.009028489	8.410
Ba	56	130	129.9063207	-1.1730857	-0.009023736	8.406
	56	132	131.9050611	-1.1916751	-0.009027842	8.409
	56	134	133.9045082	-1.2095579	-0.009026551	8.408
	56	135	134.9056884	-1.2170426	-0.009015130	8.398
	56	136	135.9045757	-1.2268201	-0.009020736	8.403
	56	137	136.9058271	-1.2342336	-0.009009005	8.392
	56	138	137.905247	-1.2434787	-0.009010715	8.393
La	57	138	137.9071149	-1.2407709	-0.008991094	8.375
	57	139	138.9063563	-1.2501944	-0.008994205	8.378
Ce	58	136	135.9071292	-1.2225869	-0.008989610	8.374
	58	138	137.905991	-1.2410550	-0.008993152	8.377
	58	140	139.9054431	-1.2589327	-0.008992376	8.376
	58	142	141.9092504	-1.2724552	-0.008960952	8.347

Pr	59	141	140.9076576	-1.2645432	-0.008968392	8.354
Nd	60	142	141.907729	-1.2722969	-0.008959837	8.346
	60	143	142.90982	-1.2788708	-0.008943152	8.330
	60	144	143.910093	-1.2872627	-0.008939324	8.327
	60	145	144.9125793	-1.2934413	-0.008920285	8.309
	60	146	145.9131226	-1.3015629	-0.008914815	8.304
	60	148	147.9168993	-1.3151161	-0.008885919	8.277
	60	150	149.9209022	-1.3284430	-0.008856287	8.250
Pm	61	145	144.9127559	-1.2924249	-0.008913275	8.303
	61	147	146.915145	-1.3073656	-0.008893644	8.284
Sm	62	144	143.9120065	-1.2836695	-0.008914371	8.304
	62	147	146.9149044	-1.3067663	-0.008889567	8.281
	62	148	147.9148292	-1.3155064	-0.008888557	8.280
	62	149	148.9171921	-1.3218085	-0.008871198	8.263
	62	150	149.9172829	-1.3303826	-0.008869217	8.262
	62	152	151.9197397	-1.3452556	-0.008850366	8.244
	62	154	153.9222169	-1.3601082	-0.008831872	8.227
Eu	63	151	150.9198578	-1.3356327	-0.008845250	8.239
	63	153	152.921238	-1.3515824	-0.008833872	8.229
Gd	64	152	151.9197995	-1.3435161	-0.008838921	8.233
	64	154	153.9208741	-1.3597713	-0.008829684	8.225
	64	155	154.9226305	-1.3666798	-0.008817289	8.213
	64	156	155.9221312	-1.3758440	-0.008819513	8.215
	64	157	156.9239686	-1.3826715	-0.008806825	8.204
	64	158	157.9241123	-1.3911928	-0.008805017	8.202
	64	160	159.9270624	-1.4055725	-0.008784828	8.183
Tb	65	159	158.9253547	-1.3977754	-0.008791040	8.189

Dy	66	156	155.9242847	-1.3720108	-0.008794941	8.192
	66	158	157.9244159	-1.3892094	-0.008792465	8.190
	66	160	159.9252046	-1.4057506	-0.008785941	8.184
	66	161	160.9269405	-1.4126796	-0.008774407	8.173
	66	162	161.9268056	-1.4214794	-0.008774564	8.173
	66	163	162.9287383	-1.4282116	-0.008762034	8.162
	66	164	163.9291819	-1.4364329	-0.008758737	8.159
Ho	67	165	164.9303288	-1.4431111	-0.008746128	8.147
Er	68	162	161.9287884	-1.4178168	-0.008751956	8.152
	68	164	163.9292088	-1.4347263	-0.008748331	8.149
	68	166	165.9302995	-1.4509654	-0.008740755	8.142
	68	167	166.9320546	-1.4578752	-0.008729792	8.132
	68	168	167.9323767	-1.4662180	-0.008727488	8.130
	68	170	169.9354702	-1.4804544	-0.008708555	8.112
Tm	69	169	168.9342179	-1.4722019	-0.008711254	8.114
Yb	70	168	167.9338896	-1.4630254	-0.008708485	8.112
	70	170	169.9347664	-1.4794784	-0.008702814	8.107
	70	171	170.9363302	-1.4865796	-0.008693448	8.098
	70	172	171.9363859	-1.4951888	-0.008692958	8.097
	70	173	172.9382151	-1.5020245	-0.008682222	8.087
	70	174	173.9388664	-1.5100381	-0.008678380	8.084
	70	176	175.9425764	-1.5236579	-0.008657147	8.064
Lu	71	175	174.9407752	-1.5159543	-0.008662596	8.069
	71	176	175.9426897	-1.5227048	-0.008651732	8.059
Hf	72	174	173.9400461	-1.5071787	-0.008661946	8.069
	72	176	175.9414076	-1.5231470	-0.008654244	8.061

	72	177	176.9432277	-1.5299918	-0.008644022	8.052
	72	178	177.9437058	-1.5381786	-0.008641453	8.049
	72	179	178.9458232	-1.5447261	-0.008629755	8.039
	72	180	179.946557	-1.5526573	-0.008625874	8.035
Ta	73	180	179.9474648	-1.5509096	-0.008616164	8.026
	73	181	180.9479958	-1.5590435	-0.008613500	8.023
W	74	180	179.9467108	-1.5508237	-0.008615687	8.025
	74	182	181.9482039	-1.5666604	-0.008608024	8.018
	74	183	182.9502228	-1.5733065	-0.008597303	8.008
	74	184	183.9509309	-1.5812633	-0.008593822	8.005
	74	186	185.9543628	-1.5951612	-0.008576136	7.989
Re	75	185	184.9529545	-1.5870647	-0.008578728	7.991
	75	187	186.9557501	-1.6015990	-0.008564700	7.978
Os	76	184	183.9524885	-1.5780259	-0.008576228	7.989
	76	186	185.953835	-1.5940093	-0.008569942	7.983
	76	187	186.9557474	-1.6007618	-0.008560223	7.974
	76	188	187.9558352	-1.6093389	-0.008560313	7.974
	76	189	188.9581442	-1.6156948	-0.008548650	7.963
	76	190	189.9584437	-1.6240602	-0.008547685	7.962
	76	192	191.961477	-1.6383568	-0.008533108	7.949
Ir	77	191	190.9605893	-1.6297397	-0.008532668	7.948
	77	193	192.9629216	-1.6447372	-0.008521954	7.938
Pt	78	190	189.9599297	-1.6208945	-0.008531024	7.947
	78	192	191.9610387	-1.6371153	-0.008526642	7.943
	78	194	193.9626809	-1.6528030	-0.008519603	7.936
	78	195	194.9647917	-1.6593571	-0.008509523	7.927
	78	196	195.9649521	-1.6678616	-0.008509498	7.927
	78	198	197.9678949	-1.6822486	-0.008496205	7.914

Au	79	197	196.9665688	-1.6740699	-0.008497817	7.916
Hg	80	196	195.9658326	-1.6653014	-0.008496435	7.914
	80	198	197.9667686	-1.6816952	-0.008493410	7.912
	80	199	198.9682806	-1.6888481	-0.008486674	7.905
	80	200	199.9683266	-1.6974670	-0.008487335	7.906
	80	201	200.9703028	-1.7041557	-0.008478387	7.898
	80	202	201.9706434	-1.7124800	-0.008477624	7.897
	80	204	203.973494	-1.7269593	-0.008465487	7.886
Tl	81	203	202.9723446	-1.7186039	-0.008466029	7.886
	81	205	204.9744278	-1.7338505	-0.008457807	7.878
Pb	82	204	203.973044	-1.7257295	-0.008459459	7.880
	82	206	205.9744657	-1.7416377	-0.008454552	7.875
	82	207	206.9758973	-1.7488710	-0.008448652	7.870
	82	208	207.9766525	-1.7567807	-0.008446061	7.867
Bi	83	209	208.9803991	-1.7608591	-0.008425163	7.848
Po	84	209	208.9824308	-1.7579876	-0.008411424	7.835
	84	210	209.9828741	-1.7662092	-0.008410520	7.834
At	85	210	209.9871479	-1.7610955	-0.008386169	7.812
	85	211	210.9874966	-1.7694117	-0.008385838	7.811
Rn	86	211	210.9906011	-1.7654674	-0.008367144	7.794
	86	220	220.0113941	-1.8226586	-0.008284812	7.717
	86	222	222.0175782	-1.8338043	-0.008260380	7.694

Fr	87	223	223.019736	-1.8394716	-0.008248752	7.684
Ra	88	223	223.0185023	-1.8398654	-0.008250518	7.685
	88	224	224.020212	-1.8468206	-0.008244735	7.680
	88	226	226.0254103	-1.8589522	-0.008225452	7.662
	88	228	228.0310707	-1.8706216	-0.008204481	7.642
Ac	89	227	227.0277523	-1.8644352	-0.008213371	7.651
Th	90	230	230.0331341	-1.8842083	-0.008192210	7.631
	90	232	232.0380558	-1.8966164	-0.008175071	7.615
Pa	91	231	231.0358842	-1.8892832	-0.008178715	7.618
U	92	233	233.0396355	-1.9020219	-0.008163184	7.604
	92	234	234.0409523	-1.9093700	-0.008159701	7.601
	92	235	235.0439301	-1.9150571	-0.008149179	7.591
	92	236	236.0455682	-1.9220840	-0.008144424	7.586
	92	238	238.0507884	-1.9341936	-0.008126864	7.570
Np	93	236	236.04657	-1.9202423	-0.008136620	7.579
	93	237	237.0481736	-1.9273036	-0.008132083	7.575
Pu	94	238	238.0495601	-1.9337421	-0.008124967	7.568
	94	239	239.0521636	-1.9398036	-0.008116333	7.560
	94	240	240.0538138	-1.9468183	-0.008111743	7.556
	94	241	241.0568517	-1.9524453	-0.008101433	7.546
	94	242	242.0587428	-1.9592191	-0.008095947	7.541
	94	244	244.0642053	-1.9710864	-0.008078223	7.525

Am	95	241	241.0568293	-1.9516278	-0.008098041	7.543
	95	243	243.0613813	-1.9644057	-0.008083974	7.530
Cm	96	243	243.0613893	-1.9635578	-0.008080485	7.527
	96	244	244.0627528	-1.9708592	-0.008077292	7.524
	96	245	245.0654915	-1.9767854	-0.008068512	7.516
	96	246	246.0672238	-1.9837180	-0.008063894	7.511
	96	247	247.0703541	-1.9892526	-0.008053654	7.502
	96	248	248.0723499	-1.9959218	-0.008048072	7.497
Bk	97	247	247.0703073	-1.9884596	-0.008050444	7.499
	97	249	249.0749877	-2.0011090	-0.008036582	7.486
Cf	98	249	249.0748539	-2.0004029	-0.008033747	7.483
	98	250	250.0764062	-2.0075156	-0.008030062	7.480
	98	251	251.0795886	-2.0129981	-0.008019913	7.471
	98	252	252.0816272	-2.0196244	-0.008014382	7.465