

Visual Acuity Conversion Chart

Line Number	Visual Angle (min)	Spatial Frequency (Cyc/deg)	LogMAR	Distance					Near				
				% Central Visual Efficiency	Snellen Equivalent			% Central Visual Efficiency	Inches (14/)	Centimeters (35/)	Revised Jaeger Standard	American Point-Type	"M" Notation
					Feet 20/	Meter 6/	Decimal						
-3	0.50	60.00	-0.30	100	10	3.0	2.00	100	7.0	17.5	-	-	0.20
-2	0.63	48.00	-0.20	100	12.5	3.8	1.60	100	8.8	21.9	-	-	0.25
-1	0.80	37.50	-0.10	100	16	4.8	1.25	100	11.2	28.0	-	-	0.32
0	1.00	30.00	0.00	100	20	6.0	1.00	100	14.0	35.0	1	3	0.40
1	1.25	24.00	0.10	95	25	7.5	0.80	100	17.5	43.8	2	4	0.50
-	1.50	20.00	0.18	91	30	9.0	0.67	95	21.0	52.5	3	5	0.60
2	1.60	18.75	0.20	90	32	9.6	0.63	94	22.4	56.0	4	6	0.64
3	2.00	15.00	0.30	85	40	12.0	0.50	90	28.0	70.0	5	7	0.80
4	2.50	12.00	0.40	75	50	15.0	0.40	50	35.0	87.5	6	8	1.0
-	3.00	10.00	0.48	67	60	18.0	0.33	42	42.0	105.0	7	9	1.2
5	3.15	9.52	0.50	65	63	18.9	0.32	40	44.1	110.3	8	10	1.3
-	3.50	8.57	0.54	63	70	21.0	0.29	32	49.0	122.5	-	-	1.4
6	4.00	7.50	0.60	60	80	24.0	0.25	20	56.0	140.0	9	11	1.6
7	5.00	6.00	0.70	50	100	30.0	0.20	15	70.0	175.0	10	12	2.0
-	5.70	5.26	0.76	44	114	34.2	0.18	12	79.8	199.5	11	13	2.3
8	6.25	4.80	0.80	40	125	37.5	0.16	10	87.5	218.8	12	14	2.5
-	7.50	4.00	0.88	32	150	45.0	0.13	6	105.0	262.5	-	-	3.0
9	8.00	3.75	0.90	30	160	48.0	0.13	5	112.0	280.0	13	21	3.2
10	10.00	3.00	1.00	20	200	60.0	0.10	2	140.0	350.0	14	23	4.0
11	12.50	2.40	1.10	17	250	75.0	0.08	0	175.0	437.5	-	-	5.0
-	15.00	2.00	1.18	16	300	90.0	0.07	0	210.0	525.0	-	-	6.0
12	16.00	1.88	1.20	15	320	96.0	0.06	0	224.0	560.0	-	-	6.4
13	20.00	1.50	1.30	10	400	120.0	0.05	0	280.0	700.0	-	-	8.0
16	40.00	0.75	1.60	5	800	240.0	0.03	0	560.0	1400.0	-	-	16.0
20	100.00	0.30	2.00	0	2000*	600.0	0.01	0	1400.0	3500.0	-	-	40.0
30	1000.00	0.03	3.00	0	20000†	6000.0	0.001	0	14000.0	35000.0	-	-	400.0

Holladay JT. Visual acuity measurements. J Cataract Refract Surg 2004;30:287-290.

Bold values are standard logMAR progression.

LogMAR = logarithm of the minimum angle of resolution.

*20/2000 is equivalent to counting fingers @ 2 feet.

†20/20000 is equivalent to hand motion @ 2 feet.

Visual Acuity Terms and Abbreviations

UDVA	uncorrected distance visual acuity
UIVA*	uncorrected intermediate visual acuity
UNVA*	uncorrected near visual acuity
Binocular UDVA	binocular uncorrected distance visual acuity
Binocular UIVA*	binocular uncorrected intermediate visual acuity
Binocular UNVA*	binocular uncorrected near visual acuity
CDVA	corrected distance visual acuity
CIVA*	corrected intermediate visual acuity
DCIVA*	distance-corrected intermediate visual acuity
CNVA*	corrected near visual acuity
DCNVA	distance-corrected near visual acuity
Binocular CDVA	binocular corrected distance visual acuity
Binocular CIVA*	binocular corrected intermediate visual acuity
Binocular DCIVA*	binocular distance-corrected intermediate visual acuity
Binocular CNVA*	binocular corrected near visual acuity
Binocular DCNVA	binocular distance-corrected near visual acuity

Kohnen T. New abbreviations for visual acuity values. J Cataract Refract Surg 2009;35:1145.

*Specify distance at which measurement was made.