



Table 1A.A.1 Decimals of a Foot Equivalents

Decimal of an inch	Fraction of an Inch	0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	Fraction of an Inch	Decimal of an Inch
0	0	0	0.0833	0.1667	0.2500	0.3333	0.4167	0.5000	0.5833	0.6667	0.7500	0.8333	0.9167	0	0
0.0625	$\frac{1}{16}$	0.0052	0.0885	0.1719	0.2552	0.3385	0.4219	0.5052	0.5885	0.6719	0.7552	0.8385	0.9219	$\frac{1}{16}$	0.0625
0.1250	$\frac{1}{8}$	0.0104	0.0938	0.1771	0.2604	0.3438	0.4271	0.5104	0.5938	0.6771	0.7604	0.8438	0.9271	$\frac{1}{8}$	0.1250
0.1875	$\frac{3}{16}$	0.0156	0.0990	0.1823	0.2656	0.3490	0.4323	0.5156	0.5990	0.6823	0.7656	0.8490	0.9323	$\frac{3}{16}$	0.1875
0.2500	$\frac{1}{4}$	0.0208	0.1042	0.1875	0.2708	0.3542	0.4375	0.5208	0.6042	0.6875	0.7708	0.8542	0.9375	$\frac{1}{4}$	0.2500
0.3125	$\frac{5}{16}$	0.0260	0.1094	0.1927	0.2760	0.3594	0.4427	0.5260	0.6094	0.6927	0.7760	0.8594	0.9427	$\frac{5}{16}$	0.3125
0.3750	$\frac{3}{8}$	0.0313	0.1146	0.1979	0.2813	0.3646	0.4479	0.5313	0.6146	0.6979	0.7813	0.8646	0.9479	$\frac{3}{8}$	0.3750
0.4375	$\frac{7}{16}$	0.0365	0.1198	0.2031	0.2865	0.3698	0.4531	0.5365	0.6198	0.7031	0.7865	0.8698	0.9531	$\frac{7}{16}$	0.4375
0.5000	$\frac{1}{2}$	0.0417	0.1250	0.2083	0.2917	0.3750	0.4583	0.5417	0.6250	0.7083	0.7917	0.8750	0.9583	$\frac{1}{2}$	0.5000
0.5625	$\frac{9}{16}$	0.0469	0.1302	0.2135	0.2969	0.3802	0.4635	0.5469	0.6302	0.7135	0.7969	0.8802	0.9635	$\frac{9}{16}$	0.5625
0.6250	$\frac{5}{8}$	0.0521	0.1354	0.2188	0.3021	0.3854	0.4688	0.5521	0.6354	0.7188	0.8021	0.8854	0.9688	$\frac{5}{8}$	0.6250
0.6875	$\frac{11}{16}$	0.0573	0.1406	0.2240	0.3073	0.3906	0.4740	0.5573	0.6406	0.7240	0.8073	0.8906	0.9740	$\frac{11}{16}$	0.6875
0.7500	$\frac{3}{4}$	0.0625	0.1458	0.2292	0.3125	0.3958	0.4792	0.5625	0.6458	0.7292	0.8125	0.8958	0.9792	$\frac{3}{4}$	0.7500
0.8125	$\frac{13}{16}$	0.0677	0.1510	0.2344	0.3177	0.4010	0.4844	0.5677	0.6458	0.7344	0.8177	0.9010	0.9844	$\frac{13}{16}$	0.8125
0.8750	$\frac{7}{8}$	0.0729	0.1563	0.2396	0.3229	0.4063	0.4896	0.5729	0.6563	0.7396	0.8229	0.9063	0.9896	$\frac{7}{8}$	0.8750
0.9375	$\frac{15}{16}$	0.0781	0.1615	0.2448	0.3281	0.4115	0.4948	0.5781	0.6615	0.7448	0.8281	0.9115	0.9948	$\frac{15}{16}$	0.9375
1.000	1	0.0833	0.1667	0.2500	0.3333	0.4167	0.5000	0.5833	0.6667	0.7500	0.8333	0.9167	1.0000	1	1.000



Table 1A.A.2 Useful Angles

Batter	Angles from Horizontal D°M'S"	Angles from Vertical Decimal
½ : 12	2° 23' 09.40"	2.3859
⅝ : 12	2° 58' 53.26"	2.9815
¾ : 12	3° 34' 34.80"	3.5763
⅞ : 12	4° 10' 13.57"	4.1704
1 : 12	4° 45' 49.11"	4.7636
1 : 6	9° 27' 44.36"	9.4623
1 : 4	14° 02' 10.48"	14.0362
1 : 3	18° 26' 05.82"	18.4349

Slope English	Angles from Horizontal D°M'S"	Angles from Horizontal Decimal
½ : 1	63° 26' 05.82"	63.4349
1 : 1	45° 00' 00.00"	45.0000
1½ : 1	33° 41' 24.24"	33.6901
2 : 1	26° 33' 54.18"	26.5651
3 : 1	18° 26' 05.82"	18.4349
4 : 1	14° 02' 10.48"	14.0362

Grade	Angles from Horizontal D°M'S"	Angles from Horizontal Decimal
1%	0° 34' 22.58"	0.5729
1½%	0° 51' 33.74"	0.8594
2%	1° 08' 44.75"	1.1458
2½%	1° 25' 55.55"	1.4321
3%	1° 43' 06.09"	1.7184
4%	2° 17' 26.20"	2.2906
5%	2° 51' 44.56"	2.8624
6%	3° 26' 00.11"	3.4336
7%	4° 00' 15.02"	4.0042
8%	4° 34' 26.12"	4.5739
9%	5° 08' 33.95"	5.1428
10%	5° 42' 38.14"	5.7106
11%	6° 16' 38.27"	6.2773
12%	6° 50' 33.98"	6.8428
12½%	7° 07' 30.06"	7.1250
15%	8° 31' 50.76"	8.5308



Figure 1A.A.3 CADD Short Cut Keys

32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	0	1	2
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
3	4	5	6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E
70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
Y	Z	[	\	]	°		`	a	b	c	d	e	f	g	h	i	j	k
108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126
l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{		}	~
127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145
£	π	1/2	1/4	3/4	1/8	3/8	5/8	7/8	1/16	3/16	5/16	7/16	9/16	11/16	13/16	15/16	1/32	3/32
146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164
5/32	7/32	9/32	11/32	13/32	15/32	17/32	19/32	21/32	23/32	25/32	27/32	29/32	31/32	1/64	3/64	5/64	7/64	9/64
165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183
11/64	13/64	15/64	17/64	19/64	21/64	23/64	25/64	27/64	29/64	31/64	°	35/64	37/64	39/64	41/64	43/64	45/64	47/64
184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202
49/64	51/64	53/64	55/64	57/64	59/64	61/64	63/64	Δ	∅	ℓ	μ	²	³	Δ		+		
203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221
222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259

To get the special character represented in the box you must type a back slash then the number above the character in the Microstation Text Editor window. Example \38 will show the & sign.

