

Solutions sheet No. 112			Sine Rule - Find an Side 1 (degrees & minutes)					
Working using $a\sin A = b\sin B$								
No.	a	b	A	B	Equation	Calculator	Rounded	Solution
1	a	20	$39^{\circ}53'$	$82^{\circ}41'$	$a = 20\sin 39^{\circ}53' / \sin 82^{\circ}41'$	12.929811	12.9	$a = 12.9$
2	b	15	$46^{\circ}21'$	$68^{\circ}48'$	$b = 15\sin 46^{\circ}21' / \sin 68^{\circ}48'$	11.641392	11.6	$b = 11.6$
3	c	55	$44^{\circ}18'$	$75^{\circ}17'$	$c = 55\sin 44^{\circ}18' / \sin 75^{\circ}17'$	39.71576	39.7	$c = 39.7$
4	d	44	$75^{\circ}31'$	$71^{\circ}16'$	$d = 44\sin 75^{\circ}31' / \sin 71^{\circ}16'$	44.984834	45.0	$d = 45.0$
5	e	24	$67^{\circ}38'$	$31^{\circ}43'$	$e = 24\sin 67^{\circ}38' / \sin 31^{\circ}43'$	42.217262	42.2	$e = 42.2$
6	f	8	$43^{\circ}53'$	$53^{\circ}54'$	$f = 8\sin 43^{\circ}53' / \sin 53^{\circ}54'$	6.863375	6.9	$f = 6.9$
7	g	140	$72^{\circ}56'$	$31^{\circ}7'$	$g = 140\sin 72^{\circ}56' / \sin 31^{\circ}7'$	258.97738	259.0	$g = 259.0$
8	h	65	$51^{\circ}57'$	$58^{\circ}46'$	$h = 65\sin 51^{\circ}57' / \sin 58^{\circ}46'$	59.86199	59.9	$h = 59.9$
9	i	15	$28^{\circ}44'$	$82^{\circ}8'$	$i = 15\sin 28^{\circ}44' / \sin 82^{\circ}8'$	7.2795114	7.3	$i = 7.3$
10	j	125	$41^{\circ}37'$	$76^{\circ}39'$	$j = 125\sin 41^{\circ}37' / \sin 76^{\circ}39'$	85.3236	85.3	$j = 85.3$
11	k	25	$48^{\circ}11'$	$76^{\circ}27'$	$k = 25\sin 48^{\circ}11' / \sin 76^{\circ}27'$	19.165508	19.2	$k = 19.2$
12	l	60	$29^{\circ}26'$	$77^{\circ}12'$	$l = 60\sin 29^{\circ}26' / \sin 77^{\circ}12'$	30.236016	30.2	$l = 30.2$
13	m	63	$77^{\circ}23'$	$57^{\circ}14'$	$m = 63\sin 77^{\circ}23' / \sin 57^{\circ}14'$	73.112261	73.1	$m = 73.1$
14	n	115	$39^{\circ}12'$	$81^{\circ}49'$	$n = 115\sin 39^{\circ}12' / \sin 81^{\circ}49'$	73.431069	73.4	$n = 73.4$
15	p	35	$32^{\circ}12'$	$82^{\circ}34'$	$p = 35\sin 32^{\circ}12' / \sin 82^{\circ}34'$	18.808737	18.8	$p = 18.8$
16	q	9.6	$86^{\circ}32'$	$35^{\circ}25'$	$q = 9.6\sin 86^{\circ}32' / \sin 35^{\circ}25'$	16.535171	16.5	$q = 16.5$
17	r	75	$35^{\circ}46'$	$76^{\circ}40'$	$r = 75\sin 35^{\circ}46' / \sin 76^{\circ}40'$	45.050778	45.1	$r = 45.1$
18	s	13.5	$63^{\circ}18'$	$71^{\circ}56'$	$s = 13.5\sin 63^{\circ}18' / \sin 71^{\circ}56'$	12.685979	12.7	$s = 12.7$
19	t	50	$75^{\circ}43'$	$62^{\circ}41'$	$t = 50\sin 75^{\circ}43' / \sin 62^{\circ}41'$	54.536029	54.5	$t = 54.5$
20	u	6.2	$81^{\circ}24'$	$42^{\circ}57'$	$u = 6.2\sin 81^{\circ}24' / \sin 42^{\circ}57'$	8.9971391	9.0	$u = 9.0$