

Solutions for GeoWorkSheet No. 122

Solutions sheet No. 122			Area of a Triangle Rule (degrees & minutes)				
Working using $A = \frac{1}{2}bc\sin A$							
No.	b	c	A	Equation	Calculator	Rounded	Solution
1	75	82	31°19'	$A = \frac{1}{2} \times 75 \times 82 \times \sin 31^\circ 19'$	1841.0156	1841	$A = 1841 \text{ units}^2$
2	20	27	69°16'	$A = \frac{1}{2} \times 20 \times 27 \times \sin 69^\circ 16'$	746.65948	746.7	$A = 746.7 \text{ units}^2$
3	29	30	49°30'	$A = \frac{1}{2} \times 29 \times 30 \times \sin 49^\circ 30'$	610.9604	611	$A = 611 \text{ units}^2$
4	16	18	37°23'	$A = \frac{1}{2} \times 16 \times 18 \times \sin 37^\circ 23'$	122.31543	122.3	$A = 122.3 \text{ units}^2$
5	11	12	88°8'	$A = \frac{1}{2} \times 11 \times 12 \times \sin 88^\circ 8'$	256.40054	256.4	$A = 256.4 \text{ units}^2$
6	15	16	32°47'	$A = \frac{1}{2} \times 15 \times 16 \times \sin 32^\circ 47'$	77.452411	77.5	$A = 77.5 \text{ units}^2$
7	125	135	43°28'	$A = \frac{1}{2} \times 125 \times 135 \times \sin 43^\circ 28'$	9355.1033	9355.1	$A = 9355.1 \text{ units}^2$
8	36	53	63°41'	$A = \frac{1}{2} \times 36 \times 53 \times \sin 63^\circ 41'$	2413.2453	2413.2	$A = 2413.2 \text{ units}^2$
9	18	32	103°22'	$A = \frac{1}{2} \times 18 \times 32 \times \sin 103^\circ 22'$	1614.3216	1614.3	$A = 1614.3 \text{ units}^2$
10	45	70	74°29'	$A = \frac{1}{2} \times 45 \times 70 \times \sin 74^\circ 29'$	5239.6324	5239.6	$A = 5239.6 \text{ units}^2$
11	22	27	77°36'	$A = \frac{1}{2} \times 22 \times 27 \times \sin 77^\circ 36'$	957.89443	957.9	$A = 957.9 \text{ units}^2$
12	2.2	3.2	47°25'	$A = \frac{1}{2} \times 2.2 \times 3.2 \times \sin 47^\circ 25'$	5.5526016	5.6	$A = 5.6 \text{ units}^2$
13	6.6	8.4	48°11'	$A = \frac{1}{2} \times 6.6 \times 8.4 \times \sin 48^\circ 11'$	40.190838	40.2	$A = 40.2 \text{ units}^2$
14	37	43	83°22'	$A = \frac{1}{2} \times 37 \times 43 \times \sin 83^\circ 22'$	2850.4311	2850.4	$A = 2850.4 \text{ units}^2$
15	7.5	8	104°50'	$A = \frac{1}{2} \times 7.5 \times 8 \times \sin 104^\circ 50'$	150.97098	151	$A = 151 \text{ units}^2$
16	61	62	36°38'	$A = \frac{1}{2} \times 61 \times 62 \times \sin 36^\circ 38'$	1495.1134	1495.1	$A = 1495.1 \text{ units}^2$
17	14.8	16.4	79°54'	$A = \frac{1}{2} \times 14.8 \times 16.4 \times \sin 79^\circ 54'$	402.86998	402.9	$A = 402.9 \text{ units}^2$
18	185	220	28°57'	$A = \frac{1}{2} \times 185 \times 220 \times \sin 28^\circ 57'$	11396.545	11397	$A = 11396.5 \text{ units}^2$
19	8.6	11.2	44°24'	$A = \frac{1}{2} \times 8.6 \times 11.2 \times \sin 44^\circ 24'$	61.763983	61.8	$A = 61.8 \text{ units}^2$
20	4.9	5.1	42°39'	$A = \frac{1}{2} \times 4.9 \times 5.1 \times \sin 42^\circ 39'$	13.259404	13.3	$A = 13.3 \text{ units}^2$