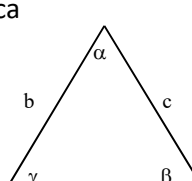
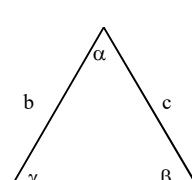
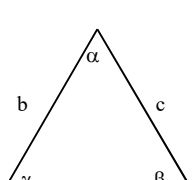
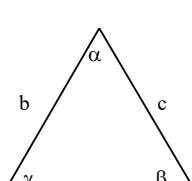
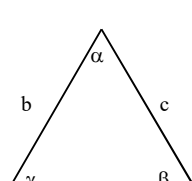


# Računanje trokuta iz dviju mjerenih duljina stranica i kuta između njih

Tangensov poučak

Trigonometrijski obrazac br. 14 - tan

Računanje trokuta iz dviju mjerenih duljina stranica i kuta između njih									
<p>Skica</p> 	<p>Mjerene veličine <math>\alpha, b, c</math></p> <p>Računate veličine <math>a, \beta, \gamma</math></p> <p>Kontrola <math>\alpha + \beta + \gamma = 180^\circ</math></p>				$\frac{(\beta + \gamma)}{2} = 90^\circ - \frac{\alpha}{2}$ $\tan \frac{(\beta - \gamma)}{2} = \frac{b - c}{b + c} \cot \frac{\alpha}{2}$ $a^2 = b^2 + c^2 - 2bc \cos \alpha$				$\beta = \frac{\beta + \gamma}{2} + \frac{\beta - \gamma}{2}$ $\gamma = \frac{\beta + \gamma}{2} - \frac{\beta - \gamma}{2}$ <p>* <math>a = (b/\sin \beta) \sin \alpha</math> * <math>a = (c/\sin \gamma) \sin \alpha</math></p>
AS	+/-	o	'	''					ASlaviček
<p><math>\arctan =</math> inverzna funkcija tangensa</p> $\frac{(\beta + \gamma)}{2} = 90^\circ - \frac{\alpha}{2}$ $\tan \frac{(\beta - \gamma)}{2} = \frac{b - c}{b + c} \cot \frac{\alpha}{2}$	$\alpha$	58	27	48	b	211,65		$\alpha/2$	29,23166667
	$\beta$	61	17	45	c	209,48	B	$\cot(\alpha/2)$	1,786969465
	$\gamma$	60	14	27	a	205,664		b-c	2,17
	$\Sigma$	180	00	00				b+c	421,13
	$(\beta + \gamma)/2$	60	46	6	Kontrola*		A	$(b-c)/(b+c)$	0,005152803
	$(\beta - \gamma)/2$	0	31	39	a	205,664		$\arctan(A * B)$	0,5275590
	$\alpha$	48	42	56	b	139,78		$\alpha/2$	24,35777778
	$\beta$	66	23	37	c	138,13	B	$\cot(\alpha/2)$	2,208812951
	$\gamma$	64	53	27	a	114,629		b-c	1,65
	$\Sigma$	180	00	00				b+c	277,91
	$(\beta + \gamma)/2$	65	38	32	Kontrola		A	$(b-c)/(b+c)$	0,005937174
	$(\beta - \gamma)/2$	0	45	5	a	114,629		$\arctan(A * B)$	0,7513399
	$\alpha$	72	15	34	b	105,64		$\alpha/2$	36,12972222
	$\beta$	49	45	21	c	117,35	B	$\cot(\alpha/2)$	1,369849053
	$\gamma$	57	59	5	a	131,818		b-c	-11,71
	$\Sigma$	180	00	00				b+c	222,99
	$(\beta + \gamma)/2$	53	52	13	Kontrola		A	$(b-c)/(b+c)$	-0,052513566
	$(\beta - \gamma)/2$	-	4	6	a	131,818		$\arctan(A * B)$	-4,1145222
	$\alpha$	82	27	12	b	134,56		$\alpha/2$	41,22666667
	$\beta$	49	30	55	c	131,54	B	$\cot(\alpha/2)$	1,141218652
	$\gamma$	48	1	53	a	175,385		b-c	3,02
	$\Sigma$	180	00	00				b+c	266,1
	$(\beta + \gamma)/2$	48	46	24	Kontrola		A	$(b-c)/(b+c)$	0,011349117
	$(\beta - \gamma)/2$	0	44	31	a	175,385		$\arctan(A * B)$	0,7420434
	$\alpha$	94	45	31	b	115,34		$\alpha/2$	47,37930556
	$\beta$	39	32	9	c	129,69	B	$\cot(\alpha/2)$	0,920213953
	$\gamma$	45	42	20	a	180,568		b-c	-14,35
	$\Sigma$	180	00	00				b+c	245,03
	$(\beta + \gamma)/2$	42	37	15	Kontrola		A	$(b-c)/(b+c)$	-0,058564257
	$(\beta - \gamma)/2$	-	3	5	a	180,568		$\arctan(A * B)$	-3,0847798

Napomena: predznak vrijednosti  $1/2(\beta - \gamma)$  bit će (+) ako je  $b > c$ , a (-) ako je  $b < c$ .

Armando Slaviček