GEODETSKI RAČUNI – VAJE

VAJA 9 – DEL 2: SFERNA TRIGONOMETRIJA – PRAVOKITNI IN PROVOSTRANIČNI SFERNI TRIKOTNIK, ORTODROMA IN LOKSODROMA – REŠITVE

Naloga 1

Reši sferni trikotnik, ki je dan z:

$a = 45° 45' 47''$	$\alpha = 60° 15' 2''$	$\gamma = 90° 0' 0''$
$\boldsymbol{b_1 = 35° 56' 16''}$	$\boldsymbol{c_1 = 55° 36' 25''}$	$\boldsymbol{\beta_1 = 45° 20' 10''}$
$\boldsymbol{b_2 = 144° 3' 44''}$	$\boldsymbol{c_2 = 124° 23' 35''}$	$\boldsymbol{\beta_2 = 134° 39' 50''}$

Naloga 2

Reši sferni trikotnik, ki je dan z:

$a = 61° 17' 20''$	$c = 33° 22' 39''$	$\beta = 90° 0' 0''$
$\boldsymbol{b = 66° 20' 58''}$	$\boldsymbol{\alpha = 73° 13' 50''}$	$\boldsymbol{\gamma = 36° 54' 46''}$

Naloga 3

Reši sferni trikotnik, ki je dan z:

$a = 41° 43' 13''$	$c = 90° 0' 0''$	$\beta = 70° 31' 5''$
$\boldsymbol{b_1 = 77° 10' 35''}$	$\boldsymbol{\alpha_1 = 40° 2' 56''}$	$\boldsymbol{\gamma = 104° 47' 29''}$
$\boldsymbol{b_2 = 77° 10' 35''}$	$\boldsymbol{\alpha = 139° 57' 4''}$	$\boldsymbol{\gamma = 75° 12' 31''}$

Naloga 4

Reši sferni trikotnik, ki je dan z:

$b = 90° 0' 0''$	$c = 123° 36' 58''$	$\alpha = 49° 11' 8''$
$\boldsymbol{a = 57° 1' 22''}$	$\boldsymbol{\beta = 64° 26' 48''}$	$\boldsymbol{\gamma = 131° 17' 46''}$

Naloga 5

dolžina ortodrome:	$D_{orto} = 9612$ km
dolžina loksodrome:	$D_{lokso} = 9930$ km
azimut loksodrome:	$\alpha = 245° 24' 27''$
presečišče ortodrome in Greenwich-a:	$\varphi = 46° 46' 20''$
presečišče ortodrome in Greenwich-a:	$\varphi = 41° 17' 4''$