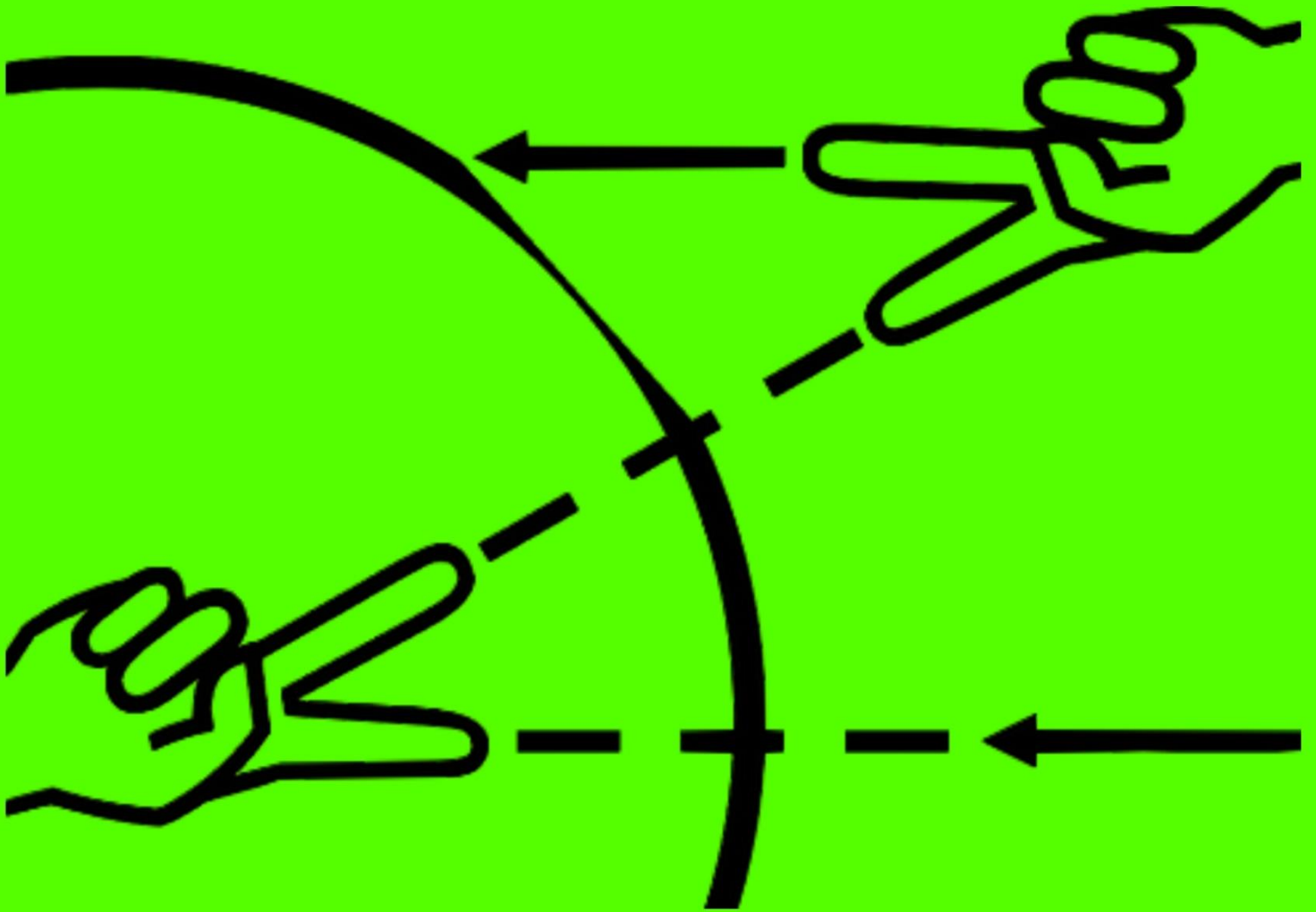


Eratoosthenes



June 2017

4 Continents

9 Countries

30 Schools

113 Measures

ARGENTINA (3)

Alta Gracia, Chivilcoy, Rio Cuarto

BRAZIL (5)

Andaraí, Itajubá, Piranguinho, Rio de Janeiro (2)

CROATIA (2)

Brštanovo, Donji Muć

COLOMBIA (2)

Guarne, Popayan

FRANCE (3)

Cernay, Lafrancaise, Marseille

GREECE (4)

Aigio, Athens, Petroupoli, Piraeus

INDIA (7)

Bhopal, Bhuj, Hyderabad, Kurukshetra, Meghpar,
Mumbai, Naranpar

ROMANIA (3)

Busteni, Mărgineni, Râmnicu Vâlcea

TUNISIA (1)

Tunis

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079
	Alta Gracia	Argentina	Fundación Caminos de Anisacate	-31.659	-64.417
	Andaraí	Brazil	Clube de Astronomia do Rio de Janeiro	-22.928	-43.258
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726
	Bhopal	India	Madhya Pradesh Vigyan Sabha	23.246	77.532
	Bhuj	India	Matruchhaya Kanya Vidyalaya	23.246	69.670
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535
	Cernay	France	Collège René Cassin	47.814	7.183
	Chivilcoy	Argentina	Parque Cielos del Sur	-34.911	-60.014
	Donji Muć	Croatia	oš kneza Branimira	43.694	16.462
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-75.449
	Hyderabad	India	Johnson Grammar School	17.416	78.543
	Itajubá	Brazil	Universidade Federal de Itajubá	-22.415	-45.449
	Kurukshetra	India	Kalpna Chawla Planetarium	29.962	76.790

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554
	Marseille	France	Palais des Congrès	43.277	5.395
	Meghpar	India	Meghpar school	23.114	69.559
	Mumbai	India	Marwari Vidyalaya High School	18.957	72.818
	Naranpar	India	Naranpar school	23.121	69.589
	Petroupoli	Greece	4o Junior High School	38.036	23.674
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655
	Piranguinho	Brazil	Universidade Federal de Itajubá	-22.411	-45.535
	Popayan	Colombia	I.E. Gabriela Mistral	2.471	-76.579
	Rio Cuarto	Argentina	Colegio Concordia	-33.149	-64.351
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317
	Rio de Janeiro	Brazil	Escola Municipal Bento Ribeiro, Méier	-22.904	-43.280
	Râmnicu Vâlcea	Romania	S.G. Nr4 Gradinita Dumbrava Minuata	45.093	24.358
	Tunis	Tunisia	Cité des Sciences	36.850	10.190

Aigio, Greece

June 2017

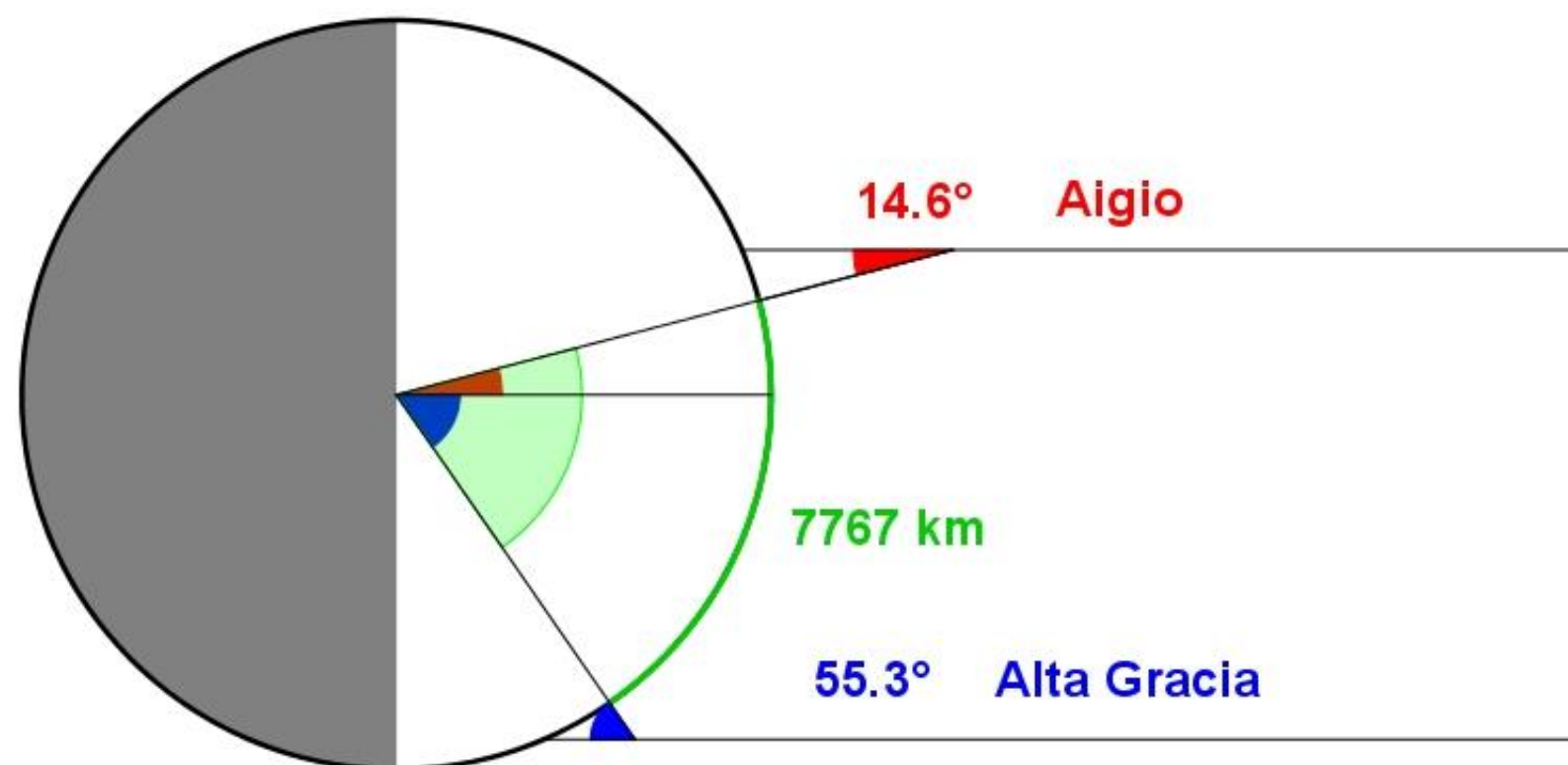


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079

Date	Gnomon	Shadow	Angle
06 June	50 cm	14 cm	15.6 °
19 June	50 cm	13 cm	14.6 °

19 June 2017 (Aigio-GREECE) Latitude: 38.252°

19 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 7767 \text{ km}}{14.6^\circ + 55.3^\circ} = 40002 \text{ km}$$



Alta Gracia, Argentina

June 2017

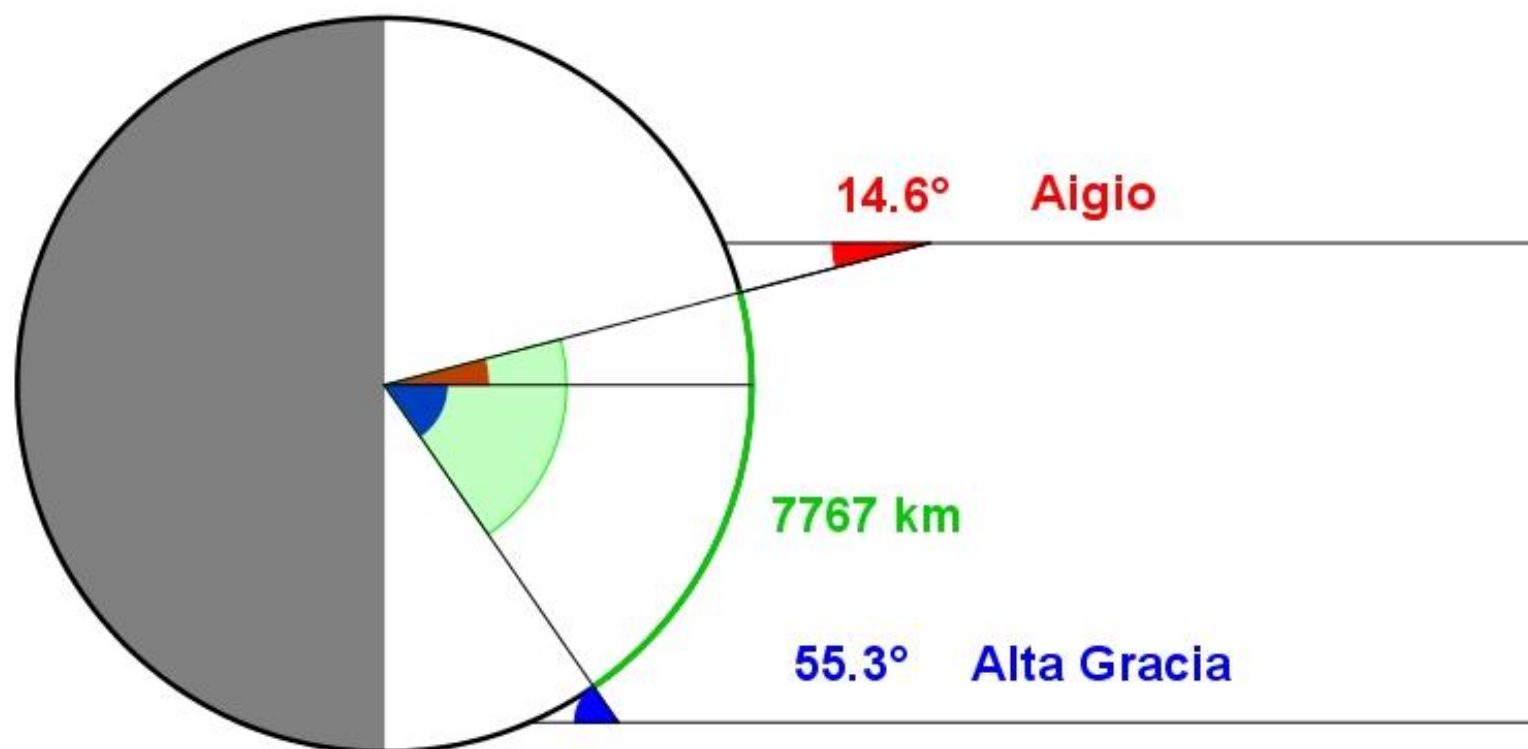


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Alta Gracia	Argentina	Fundación Caminos de Anisacate	-31.659	-64.417

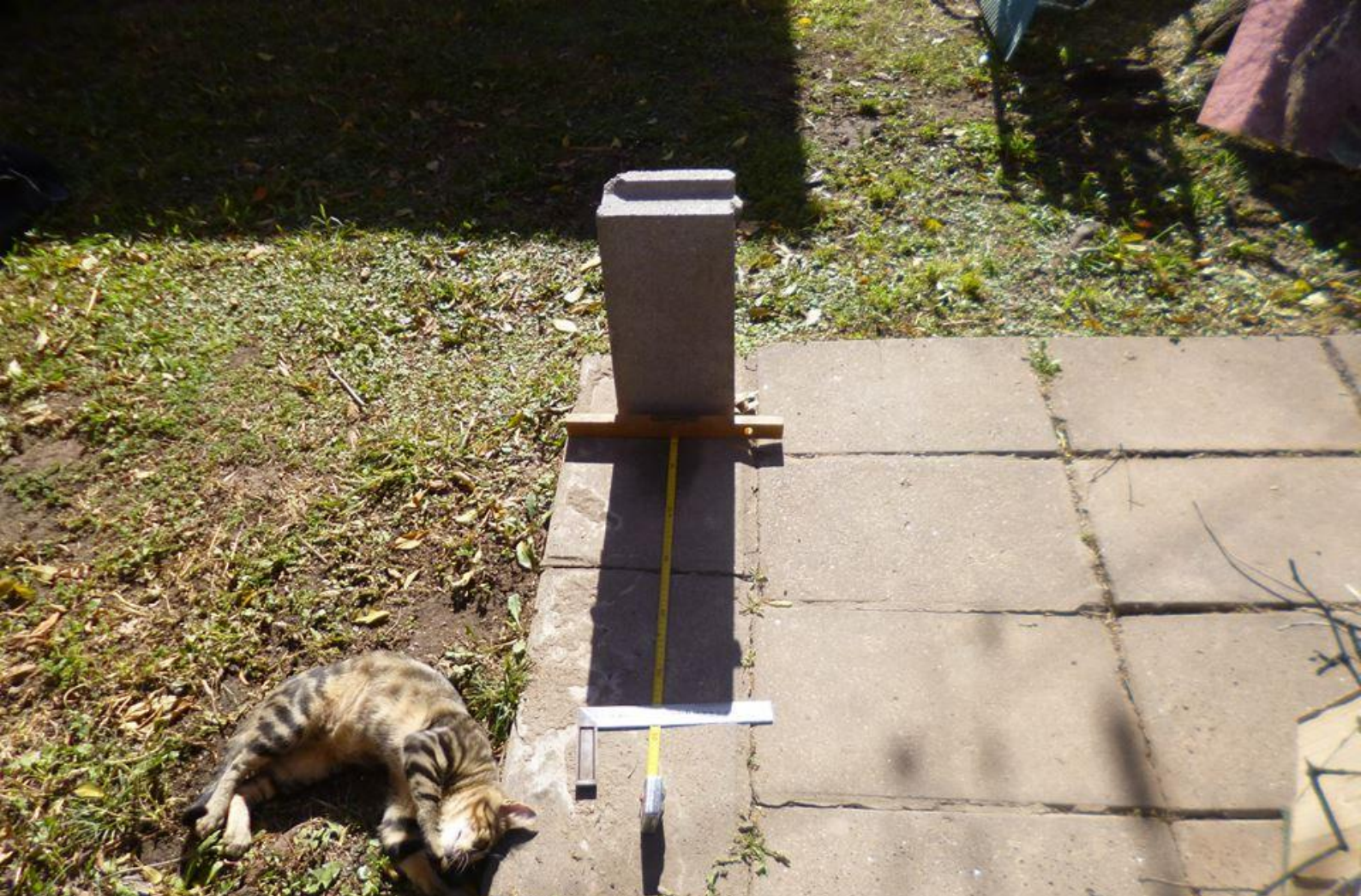
Date	Gnomon	Shadow	Angle
09 June	79.5 cm	-103 cm	-52.3 °
10 June	39 cm	-54.5 cm	-54.4 °
12 June	39 cm	-55.5 cm	-54.9 °
13 June	39 cm	-56 cm	-55.1 °
15 June	39 cm	-56.4 cm	-55.3 °
18 June	39 cm	-56.5 cm	-55.4 °
19 June	39 cm	-56.3 cm	-55.3 °
20 June	39 cm	-56.6 cm	-55.4 °
21 June	39 cm	-56.4 cm	-55.3 °
23 June	39.5 cm	-56.7 cm	-55.1 °
25 June	39.5 cm	-57 cm	-55.3 °
30 June	39.5 cm	-56.4 cm	-55.0 °

19 June 2017 (Aigio-GREECE) Latitude: 38.252°

19 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 7767 \text{ km}}{14.6^\circ + 55.3^\circ} = 40002 \text{ km}$$



Andaraí, Brazil

June 2017

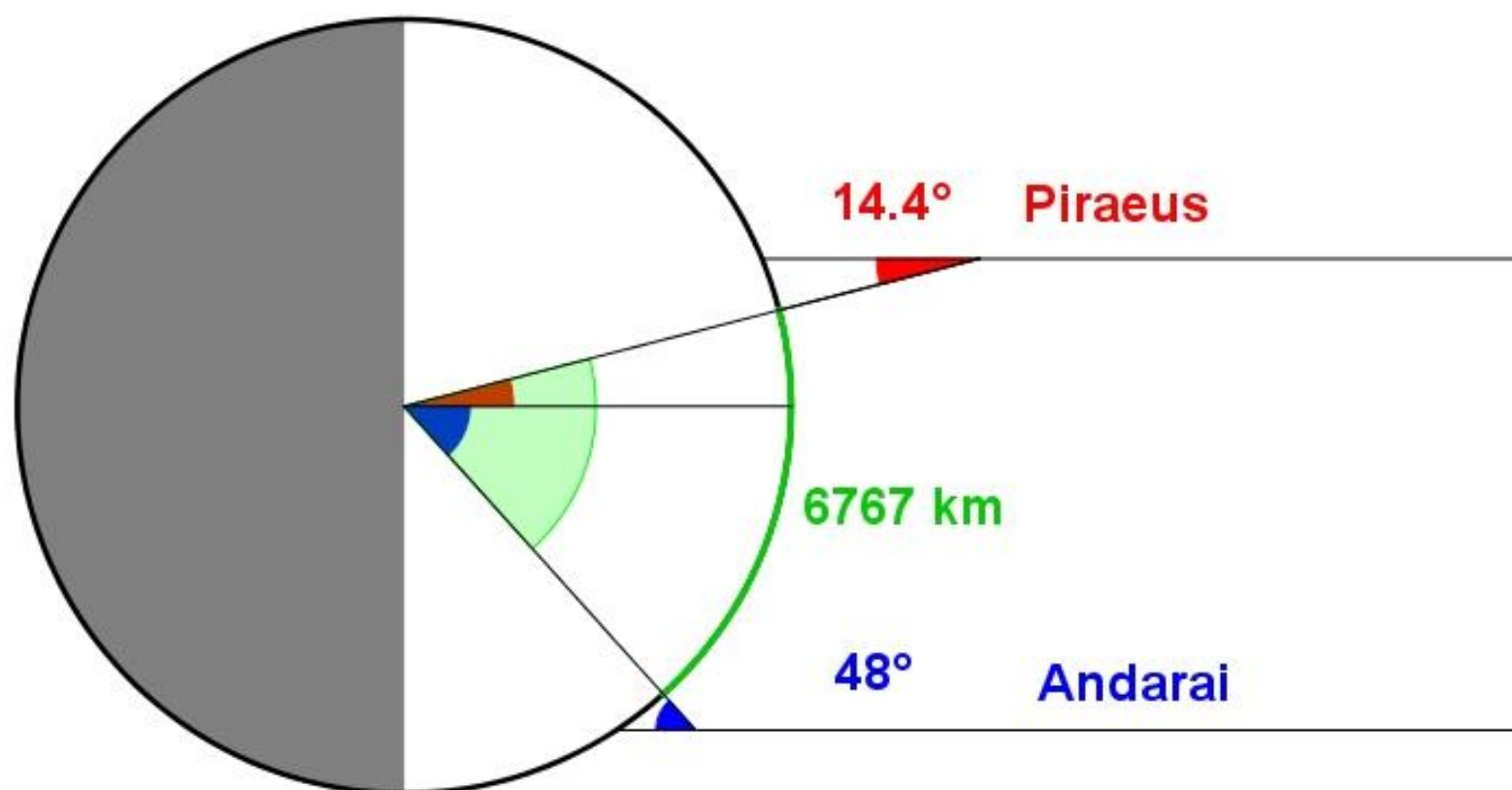


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Andaraí	Brazil	Clube de Astronomia do Rio de Janeiro	-22.928	-43.258

Date	Gnomon	Shadow	Angle
11 June	59 cm	-61 cm	-46 °
21 June	100 cm	-111 cm	-48 °

21 June 2017 (Piraeus-GREECE) Latitude: 37.977°

21 June 2017 (Andarai-BRAZIL) Latitude: -22.928°



$$\text{circumference} = \frac{360^\circ \times 6767 \text{ km}}{14.4^\circ + 48^\circ} = 39040 \text{ km}$$



Athens-A, Greece

June 2017

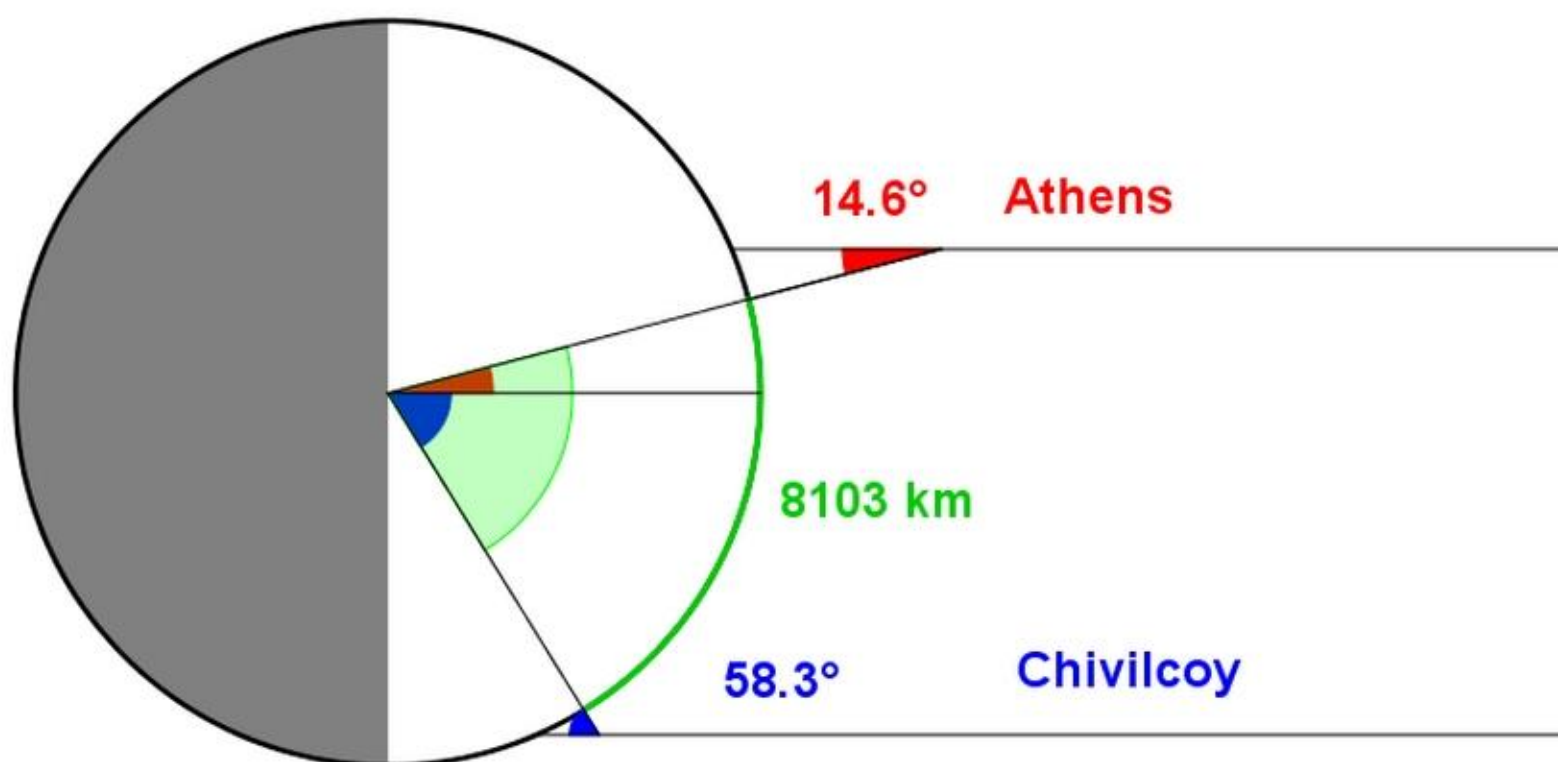


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
15 June	49 cm	10.8 cm	12.4 °
21 June	246 cm	64 cm	14.6 °
30 June	49 cm	13.1 cm	15.0 °

21 June 2017 (Athens-GREECE) Latitude: 38.027°

21 June 2017 (Chivilcoy-ARGENTINA) Latitude: -34.911°



$$\text{circumference} = \frac{360^\circ \times 8103 \text{ km}}{14.6^\circ + 58.3^\circ} = 40015 \text{ km}$$

ΠΕΙΡΑΜΑΤΙΚΟ ΓΥΜΝΑΣΙΟ
ΑΓΙΩΝ ΑΝΑΡΓΥΡΩΝ



Bhopal, India

June 2017

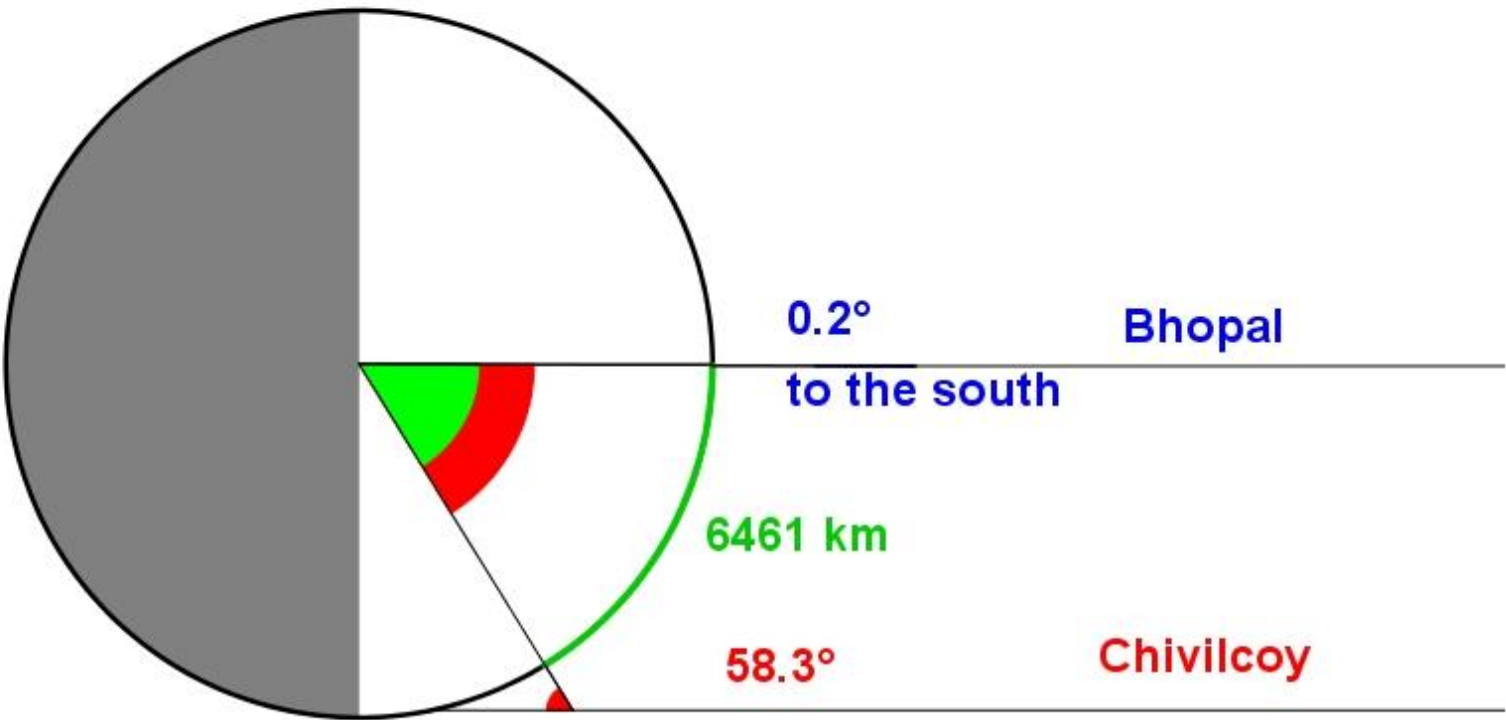


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bhopal	India	Madhya Pradesh Vigyan Sabha	23.246	77.532

Date	Gnomon	Shadow	Angle
21 June	35.4 cm	-0.1 cm	-0.2 °

21 June 2017 (Chivilcoy-ARGENTINA) Latitude: -34.911°

21 June 2017 (Bhopal-INDIA) Latitude: 23.246°



circumference = $\frac{360^\circ \times 6461 \text{ km}}{58.3^\circ - 0.2^\circ} = 40034 \text{ km}$

प्र. विज्ञान सभा
विज्ञान परिसर

ASTRONOMICAL TELESCOPE MAKING WORKSHOP
20th to 29th June, 2017
MADHYA PRADESH VIGYAN SABHA, BHOPAL

Organized by
Vigyan Prasur
Archaeological Area, Sector 82
Gurgaon, Uttarakhand, India-201309

National Council for Science
& Technology Communication (NCSTC)
100, Convent Road, New Delhi-110054



Bhuj, India

June 2017

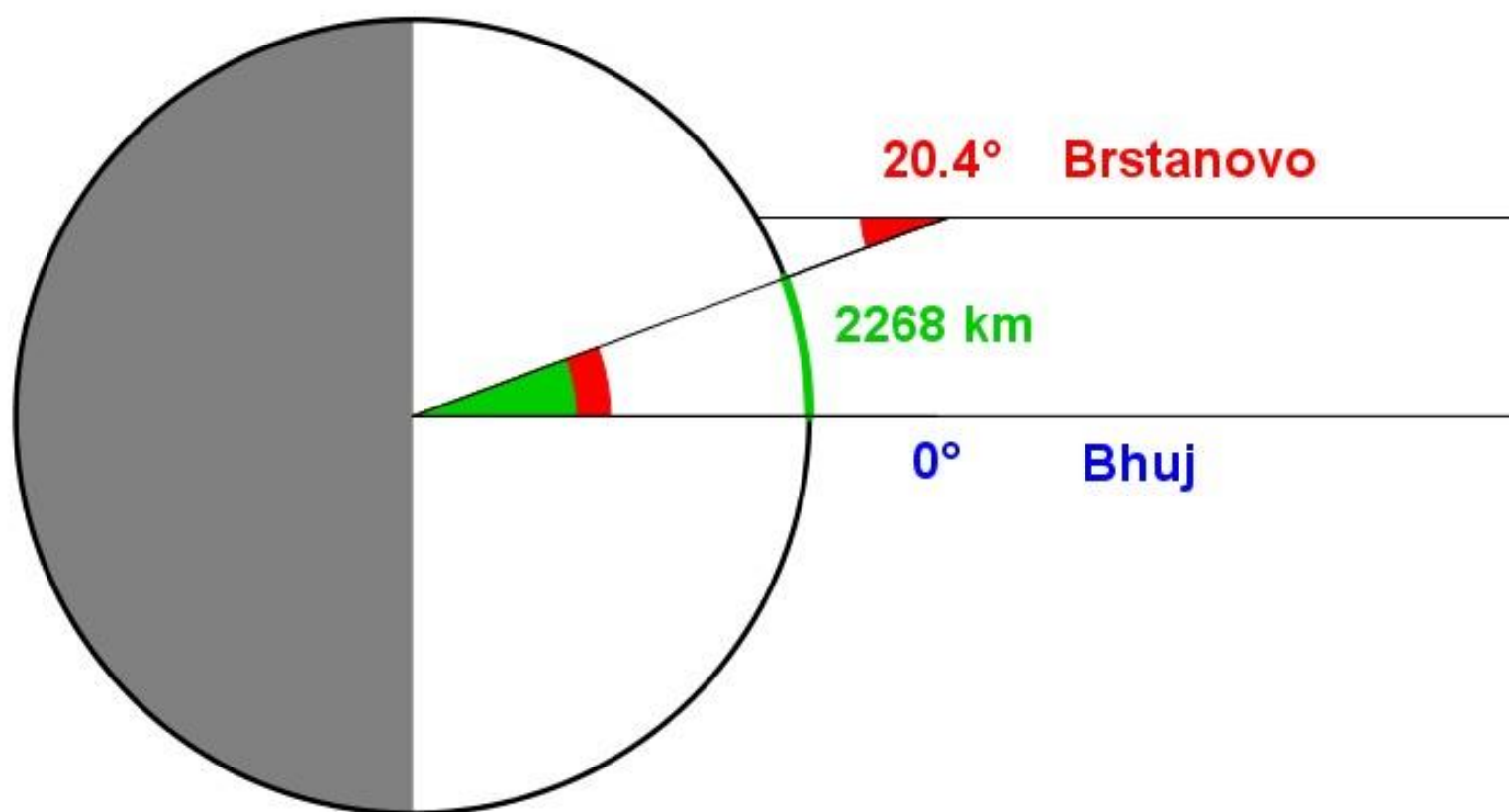


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bhuj	India	Matruchhaya Kanya Vidyalaya	23.246	69.670

Date	Gnomon	Shadow	Angle
13 June	100 cm	0 cm	0 °

13 June 2017 (Brstanovo-CROATIA) Latitude: 43.658°

13 June 2017 (Bhuj-INDIA) Latitude: 23.246°



$$\text{circumference} = \frac{360^\circ \times 2268 \text{ km}}{20.4^\circ - 0^\circ} = 40024 \text{ km}$$



12.06.2017 07:51



12.06.2017 08:30



Brštanovo, Croatia

June 2017

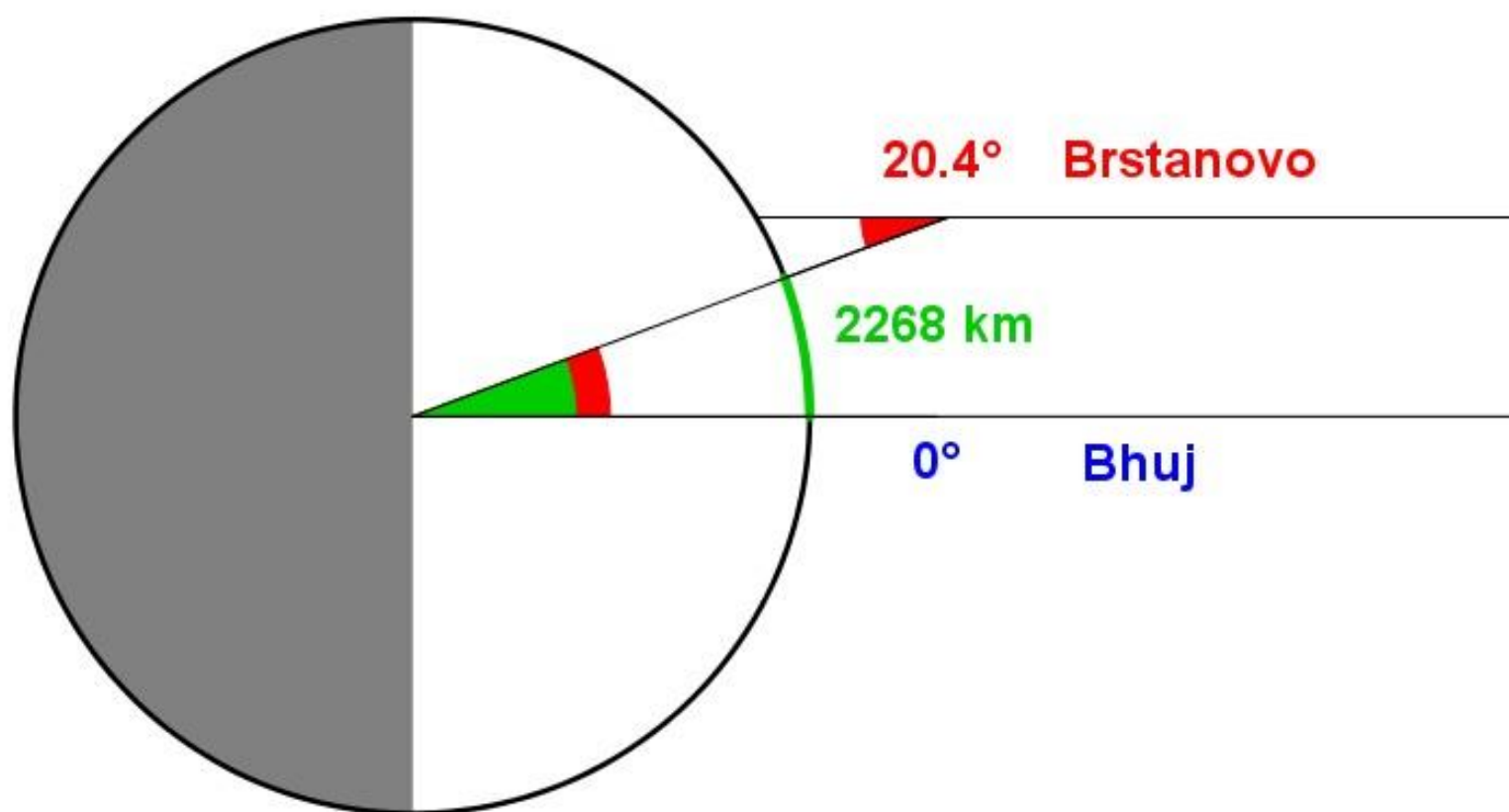


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415

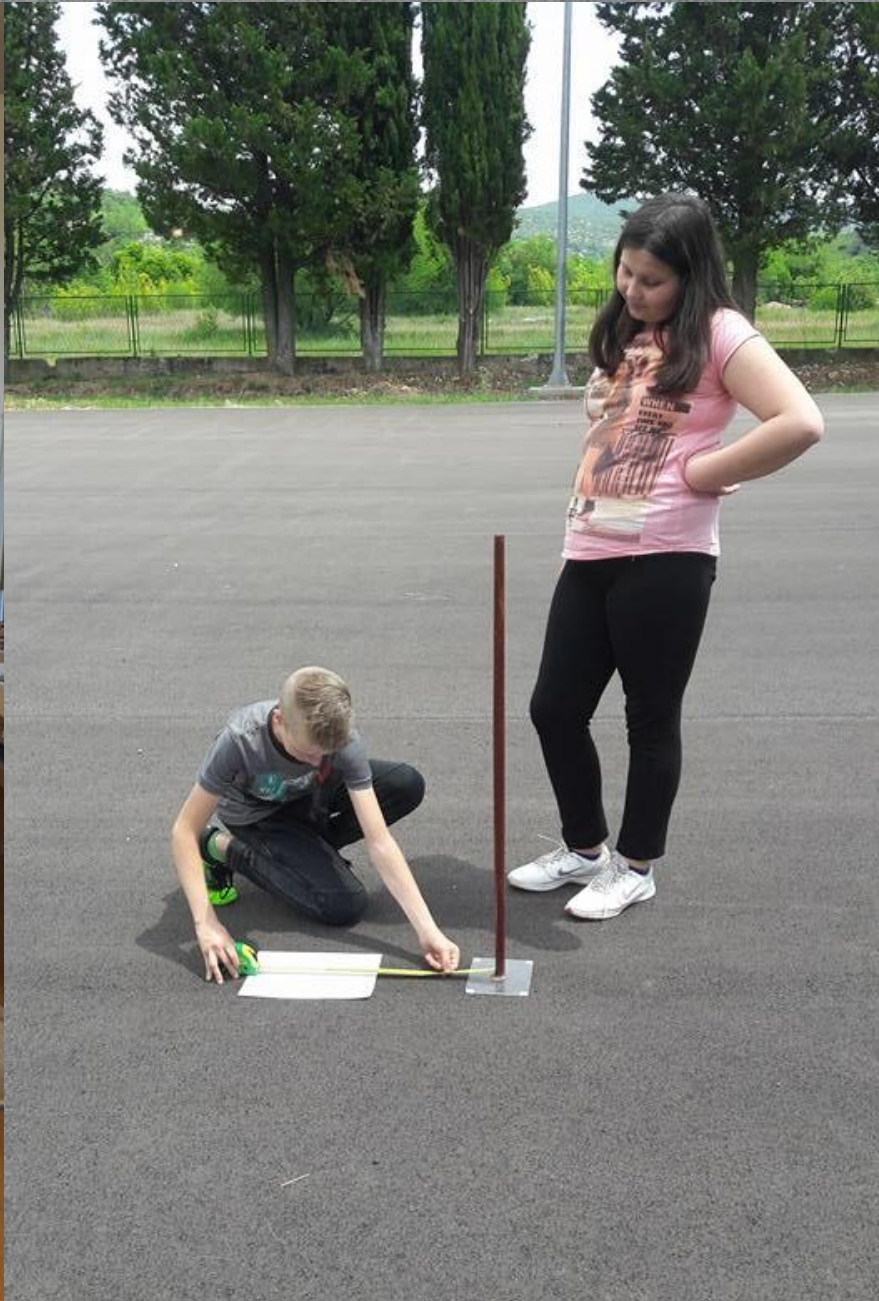
Date	Gnomon	Shadow	Angle
07 June	100 cm	37.6 cm	20.6 °
13 June	100 cm	37,2 cm	20.4 °

13 June 2017 (Brstanovo-CROATIA) Latitude: 43.658°

13 June 2017 (Bhuj-INDIA) Latitude: 23.246°



$$\text{circumference} = \frac{360^\circ \times 2268 \text{ km}}{20.4^\circ - 0^\circ} = 40024 \text{ km}$$



Busteni, Romania

June 2017

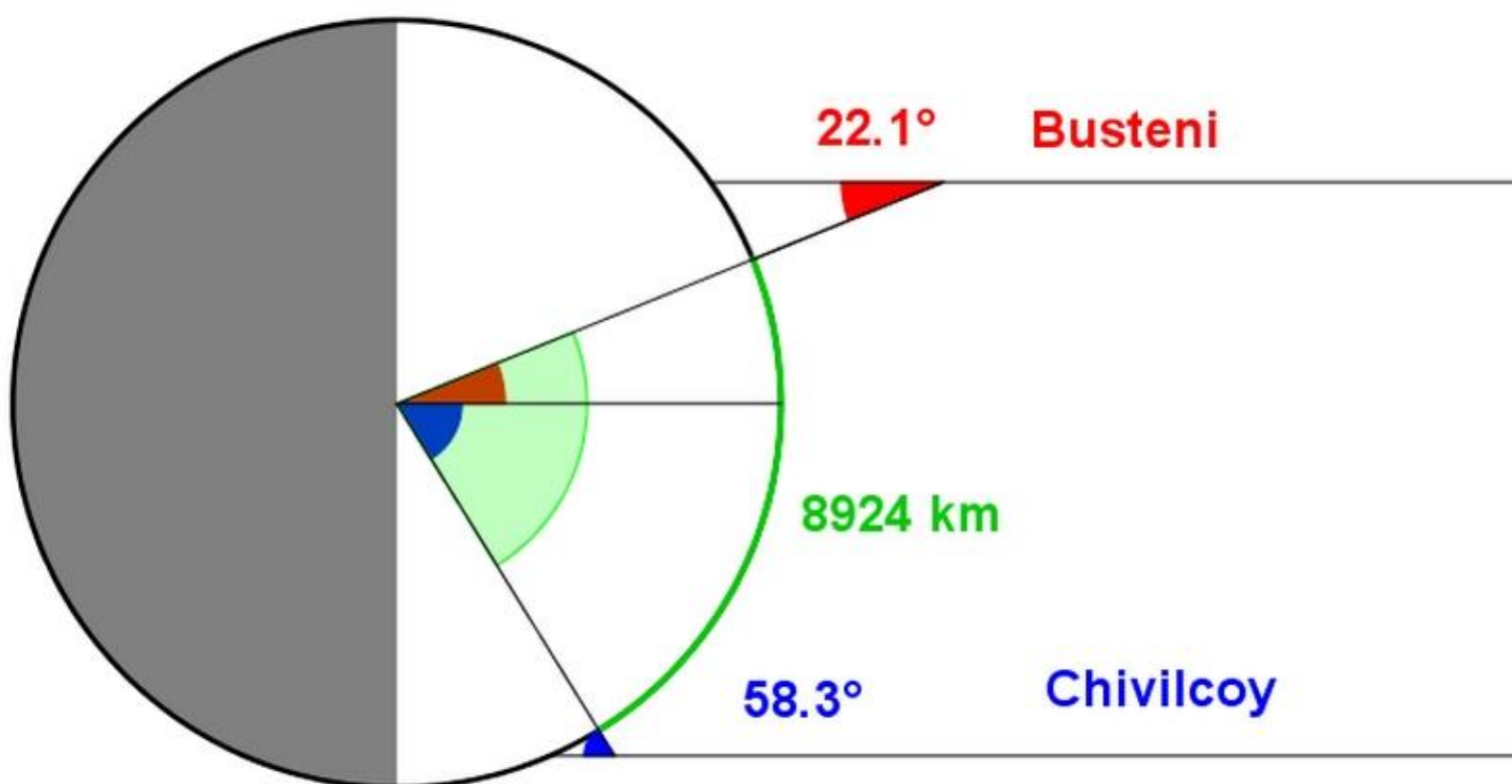


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535

Date	Gnomon	Shadow	Angle
05 June	35.9 cm	15 cm	22.7 °
06 June	50 cm	20.8 cm	22.6 °
07 June	25 cm	10.3 cm	22.4 °
08 June	50 cm	20.6 cm	22.4 °
14 June	28.3 cm	11.5 cm	22.1 °
15 June	28.3 cm	11.4 cm	21.9 °
20 June	39.6 cm	16 cm	22 °
21 June	37 cm	15 cm	22.1 °
23 June	29.6 cm	12 cm	22.1 °
24 June	34.5 cm	14 cm	22.1 °

21 June 2017 (Busteni-ROMANIA) Latitude: 45.416°

21 June 2017 (Chivilcoy-ARGENTINA) Latitude: -34.911°



$$\text{circumference} = \frac{360^\circ \times 8924 \text{ km}}{22.1^\circ + 58.3^\circ} = 39958 \text{ km}$$



Cernay, France

June 2017

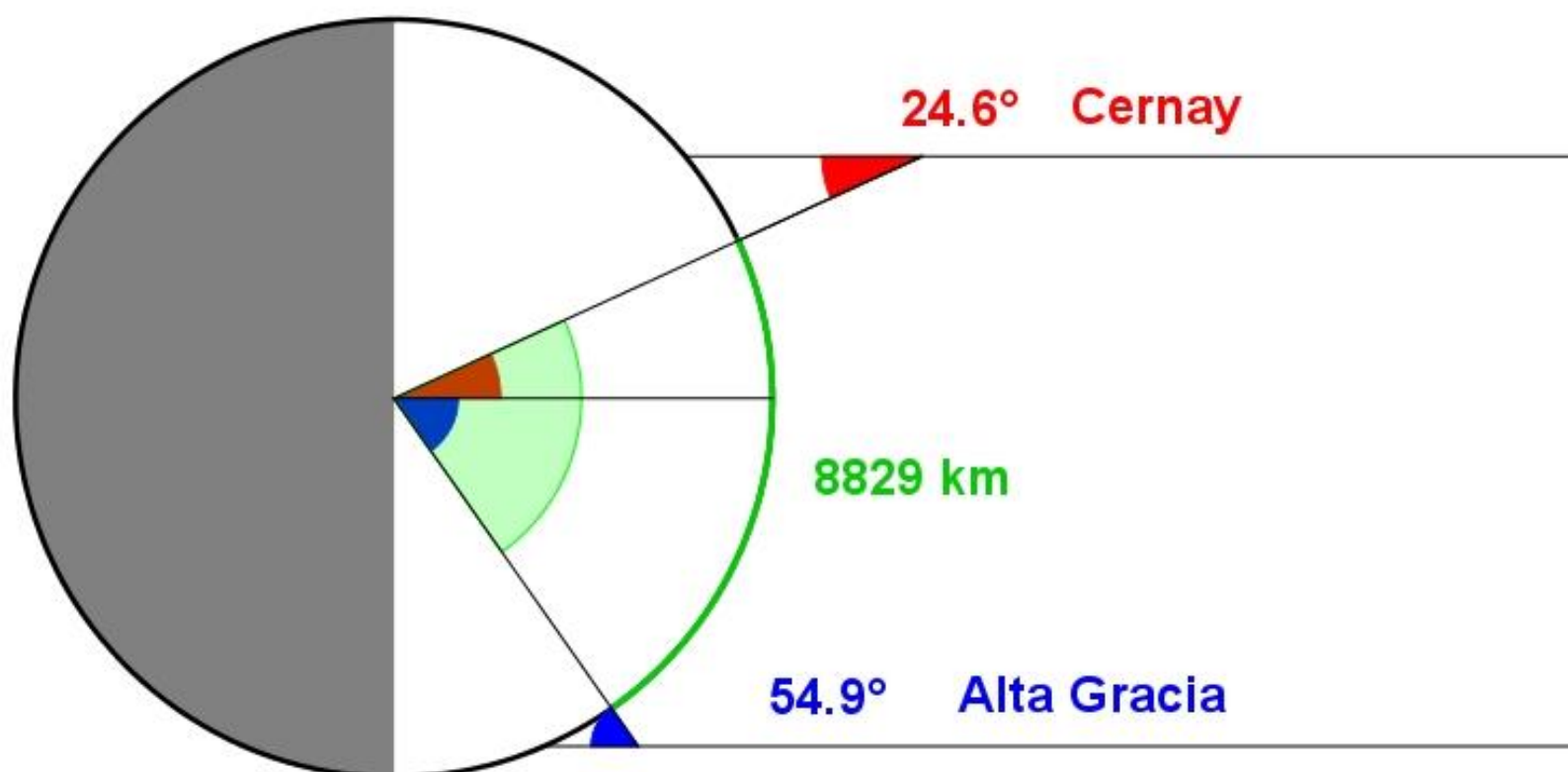


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Cernay	France	Collège René Cassin	47.814	7.183

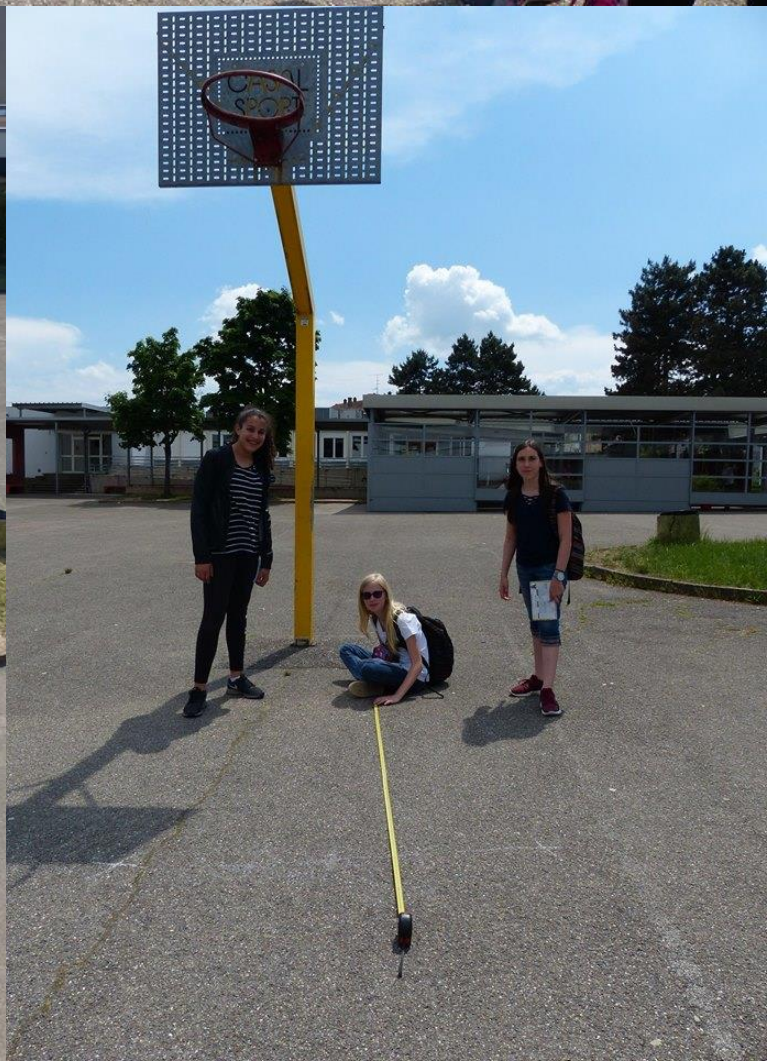
Date	Gnomon	Shadow	Angle
02 June	368.5 cm	176 cm	25.5 °
12 June	368.5 cm	169 cm	24.6 °
20 June	368.5 cm	167 cm	24.4 °

12 June 2017 (Cernay-FRANCE) Latitude: 47.814°

12 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 8829 \text{ km}}{24.6^\circ + 54.9^\circ} = 39980 \text{ km}$$



Chivilcoy, Argentina

June 2017

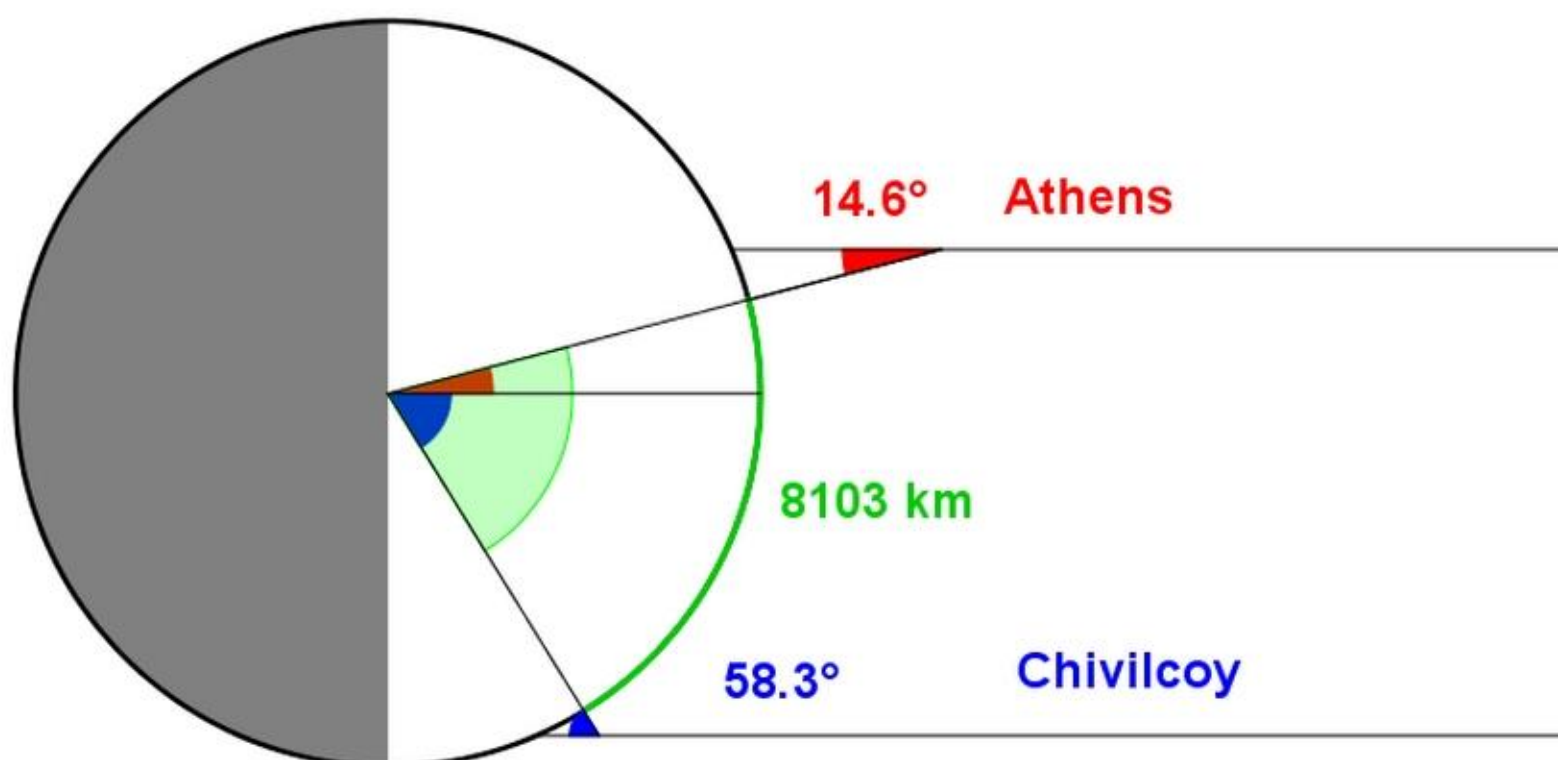


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Chivilcoy	Argentina	Parque Cielos del Sur	-34.911	-60.014

Date	Gnomon	Shadow	Angle
21 June	100 cm	-162 cm	-58.3 °

21 June 2017 (Athens-GREECE) Latitude: 38.027°

21 June 2017 (Chivilcoy-ARGENTINA) Latitude: -34.911°



$$\text{circumference} = \frac{360^\circ \times 8103 \text{ km}}{14.6^\circ + 58.3^\circ} = 40015 \text{ km}$$



Donji Muć, Croatia

June 2017

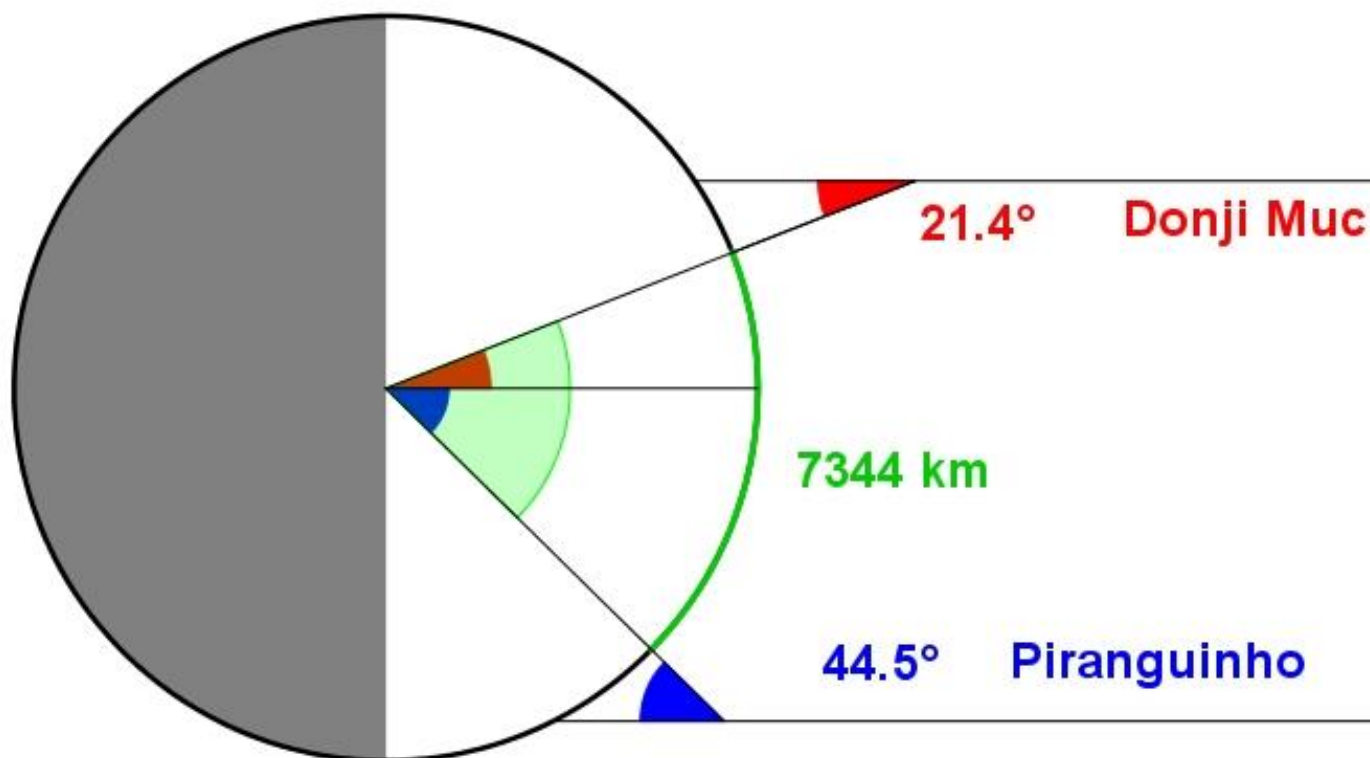


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Donji Muć	Croatia	oš kneza Branimira	43.694	16.462

Date	Gnomon	Shadow	Angle
01 June	100 cm	39.2 cm	21.4 °
08 June	100 cm	37.6 cm	20.6 °

01 June 2017 (Donji Muc-CROATIA) Latitude: 43.694°

01 June 2017 (Piranguinho-BRAZIL) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7344 \text{ km}}{21.4^\circ + 44.5^\circ} = 40119 \text{ km}$$



Guarne, Colombia

June 2017

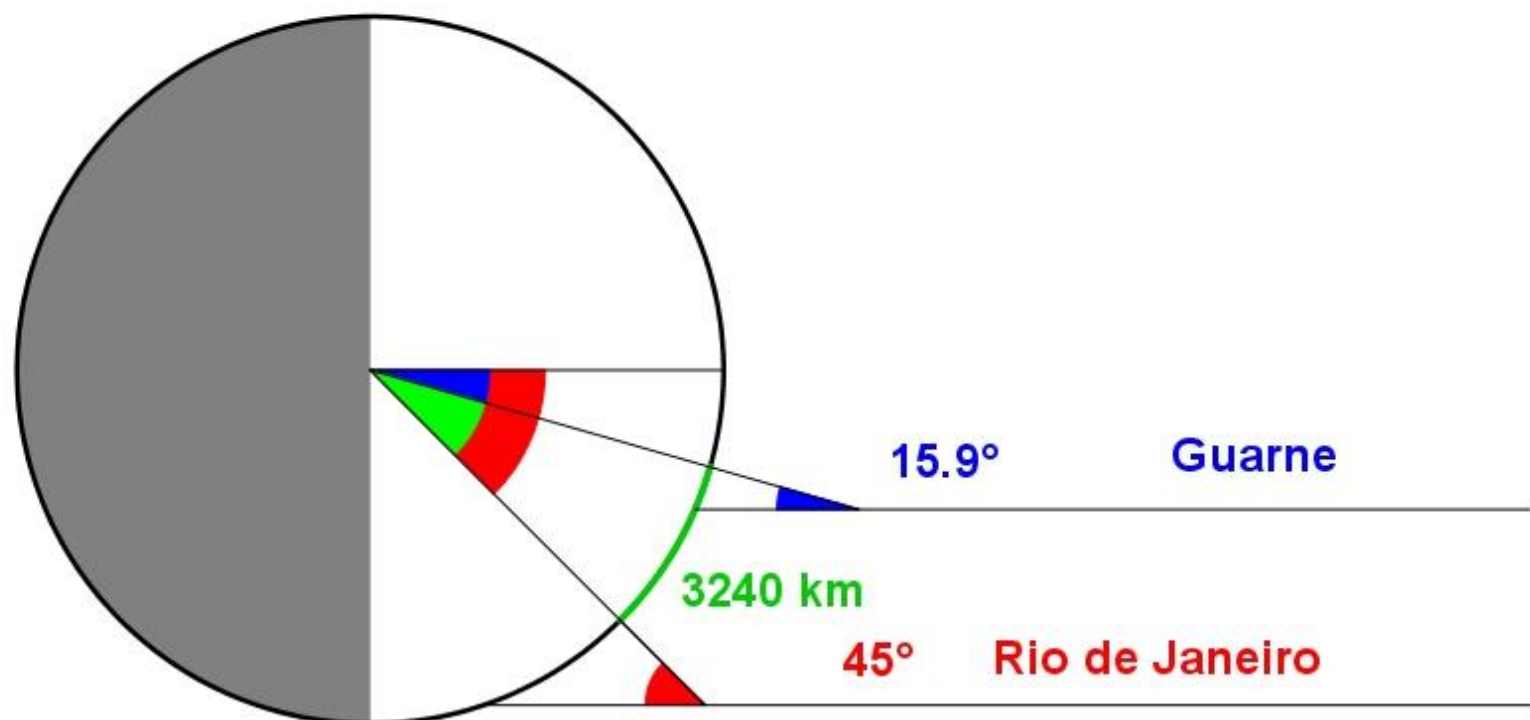


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-75.449

Date	Gnomon	Shadow	Angle
01 June	64.8 cm	-17.3 cm	-14.9 °
02 June	64.8 cm	-17.5 cm	-15.1 °
05 June	64.8 cm	-18.0 cm	-15.5 °
16 June	64.8 cm	-18.6 cm	-16.0 °
18 June	64.6 cm	-18.7 cm	-16.1 °
19 June	64.8 cm	-18.7 cm	-16.1 °
20 June	64.8 cm	-18.8 cm	-16.2 °
21 June	64.8 cm	-18.9 cm	-16.3 °
22 June	64.8 cm	-18.9 cm	-16.3 °
28 June	64.8 cm	-18.5 cm	-15.9 °
30 June	64.8 cm	-18.3 cm	-15.8 °

28 June 2017 (Rio de Janeiro-BRAZIL) Latitude: -22.89°

28 June 2017 (Guarne-COLOMBIA) Latitude: 6.274°



$$\text{circumference} = \frac{360^\circ \times 3240 \text{ km}}{45^\circ - 15.9^\circ} = 40082 \text{ km}$$



Hyderabad, India

June 2017

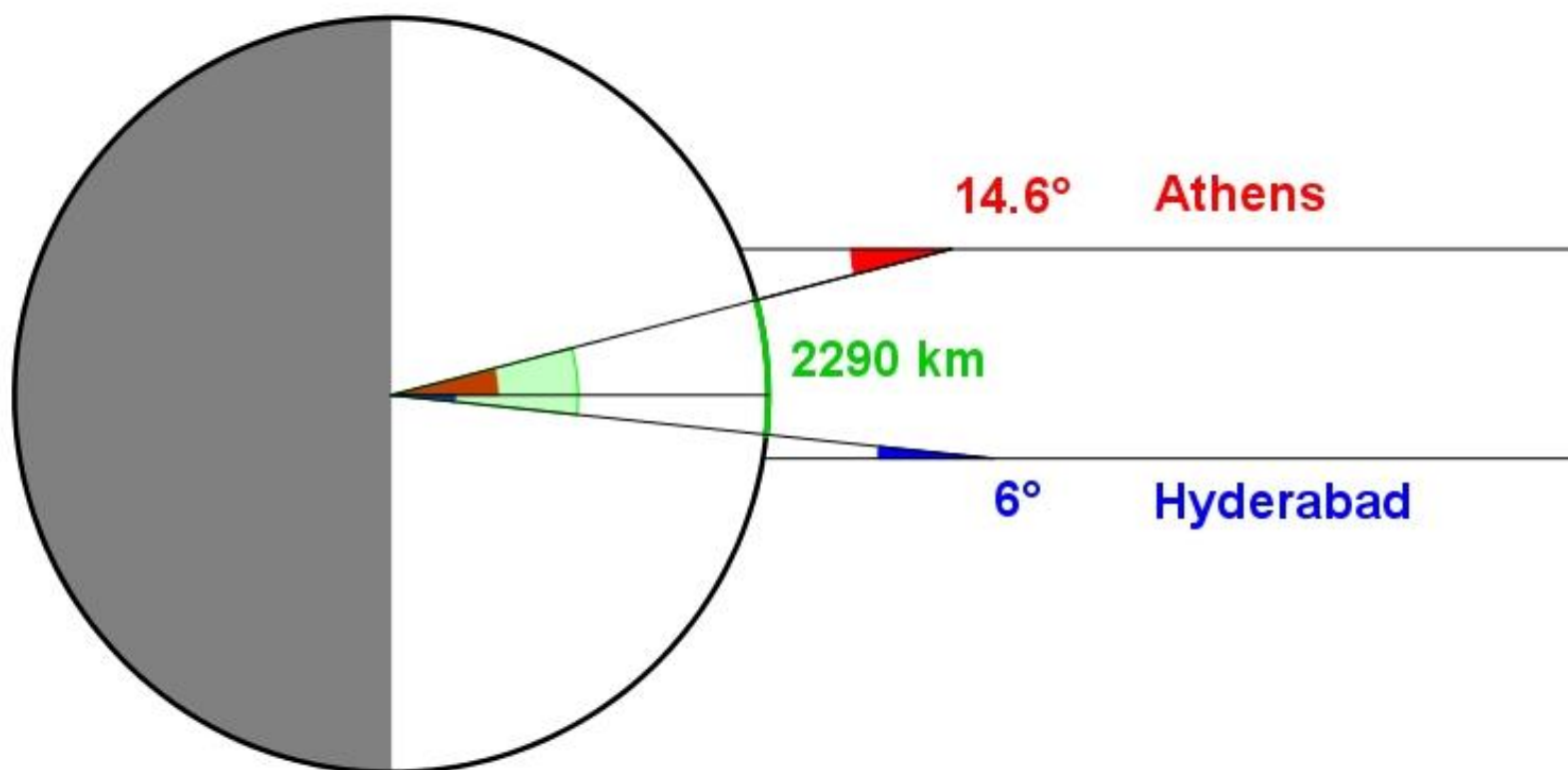


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Hyderabad	India	Johnson Grammar School	17.416	78.543

Date	Gnomon	Shadow	Angle
21 June	61 cm	-6.4 cm	-6.0 °

21 June 2017 (Athens-GREECE) Latitude: 38.027°

21 June 2017 (Hyderabad-INDIA) Latitude: 17.416°



$$\text{circumference} = \frac{360^\circ \times 2290 \text{ km}}{14.6^\circ + 6^\circ} = 40019 \text{ km}$$



Itajubá, Brazil

June 2017

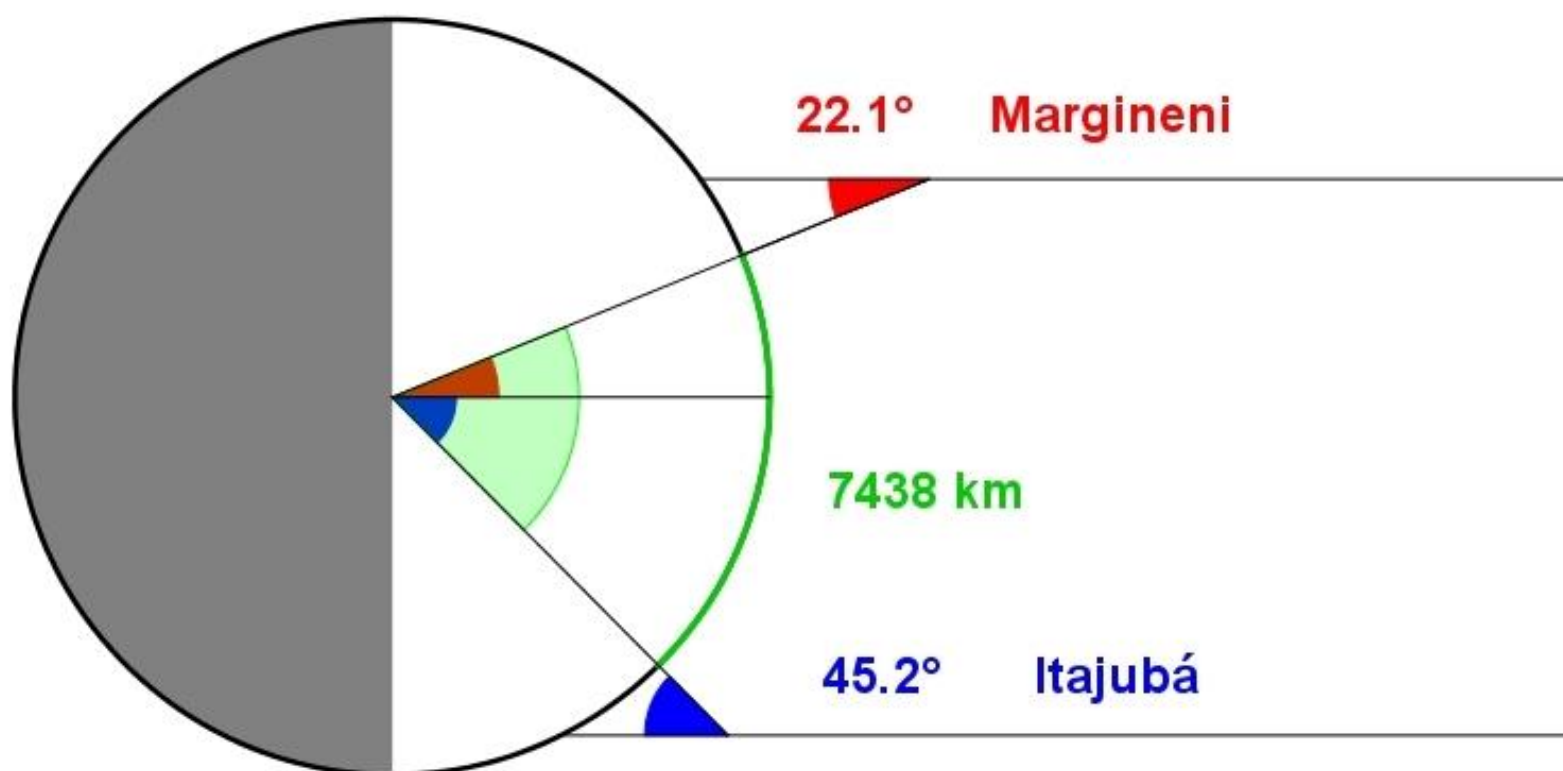


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Itajubá	Brazil	Universidade Federal de Itajubá	-22.415	-45.449

Date	Gnomon	Shadow	Angle
21 June	81 cm	-81.72 cm	-45.2 °

21 June 2017 (Margineni-ROMANIA) Latitude: 44.533°

21 June 2017 (Itajubá-BRAZIL) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 7438 \text{ km}}{22.1^\circ + 45.2^\circ} = 39787 \text{ km}$$



Kurukshetra, India

June 2017

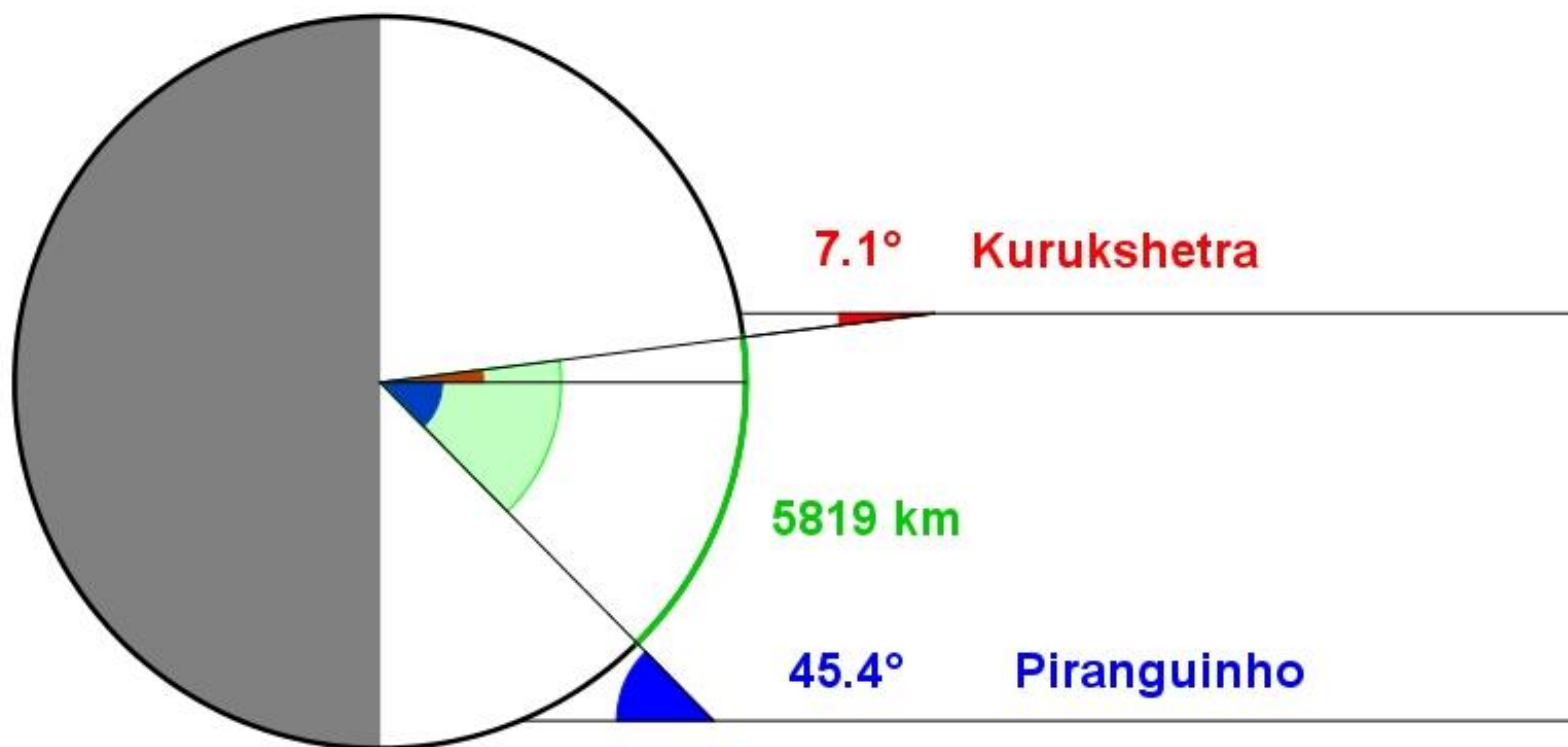


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Kurukshetra	India	Kalpana Chawla Planetarium	29.962	76.790

Date	Gnomon	Shadow	Angle
05 June	29.5 cm	3.7 cm	7.1 °

05 June 2017 (Kurukshetra-INDIA) Latitude: 29.962°

05 June 2017 (Piranguinho-BRAZIL) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 5819 \text{ km}}{7.1^\circ + 45.4^\circ} = 39902 \text{ km}$$



Lafrançaise, France

June 2017

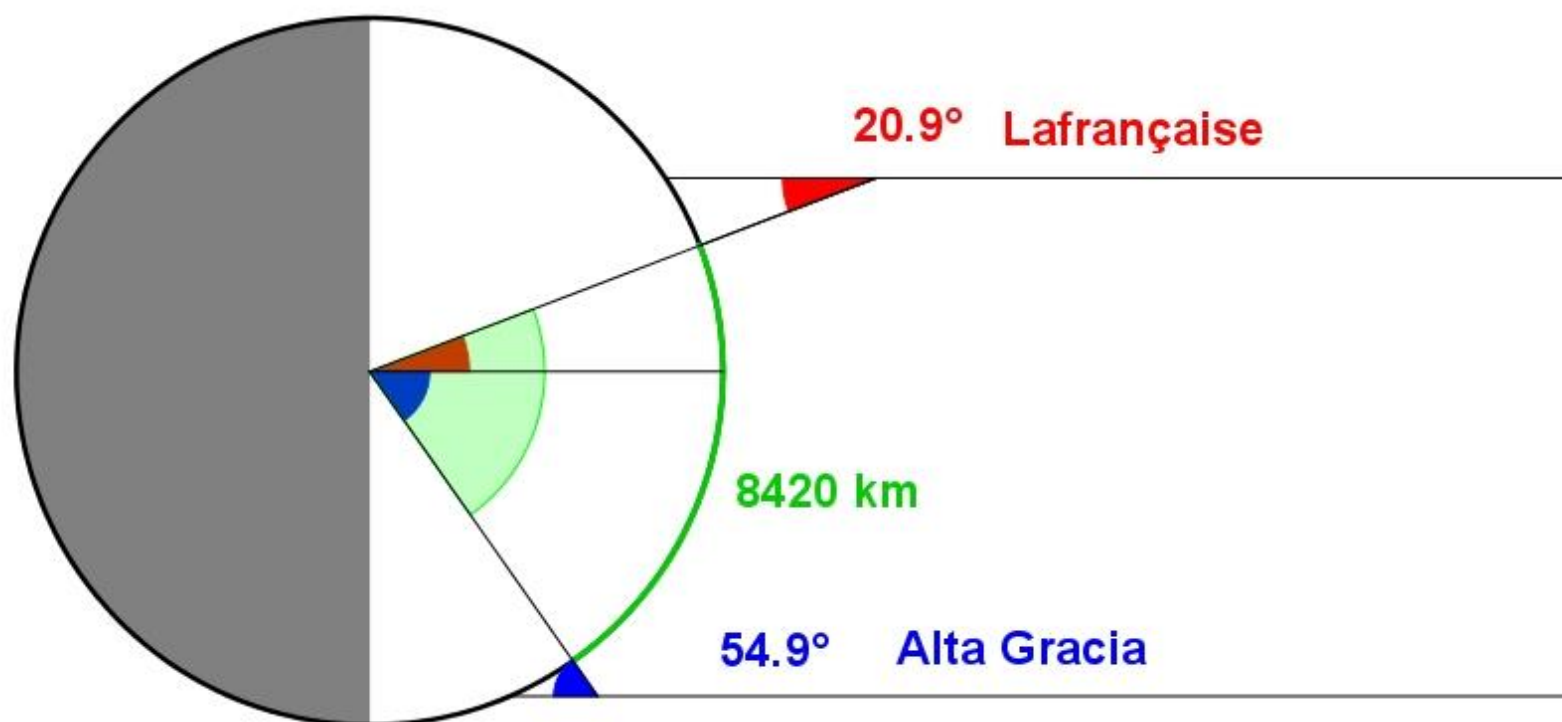


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237

Date	Gnomon	Shadow	Angle
02 June	100 cm	40.1 cm	21.9 °
06 June	100 cm	39.0 cm	21.3 °
09 June	100 cm	39.5 cm	21.6 °
12 June	100 cm	38.2 cm	20.9 °
13 June	100 cm	38.0 cm	20.8 °
16 June	100 cm	37.8 cm	20.7 °
19 June	100 cm	37.8 cm	20.7 °
20 June	100 cm	37.8 cm	20.7 °

12 June 2017 (Lafrançaise-FRANCE) Latitude: 44.127°

12 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 8420 \text{ km}}{20.9^\circ + 54.9^\circ} = 39989 \text{ km}$$



Mărgineni, Romania

June 2017

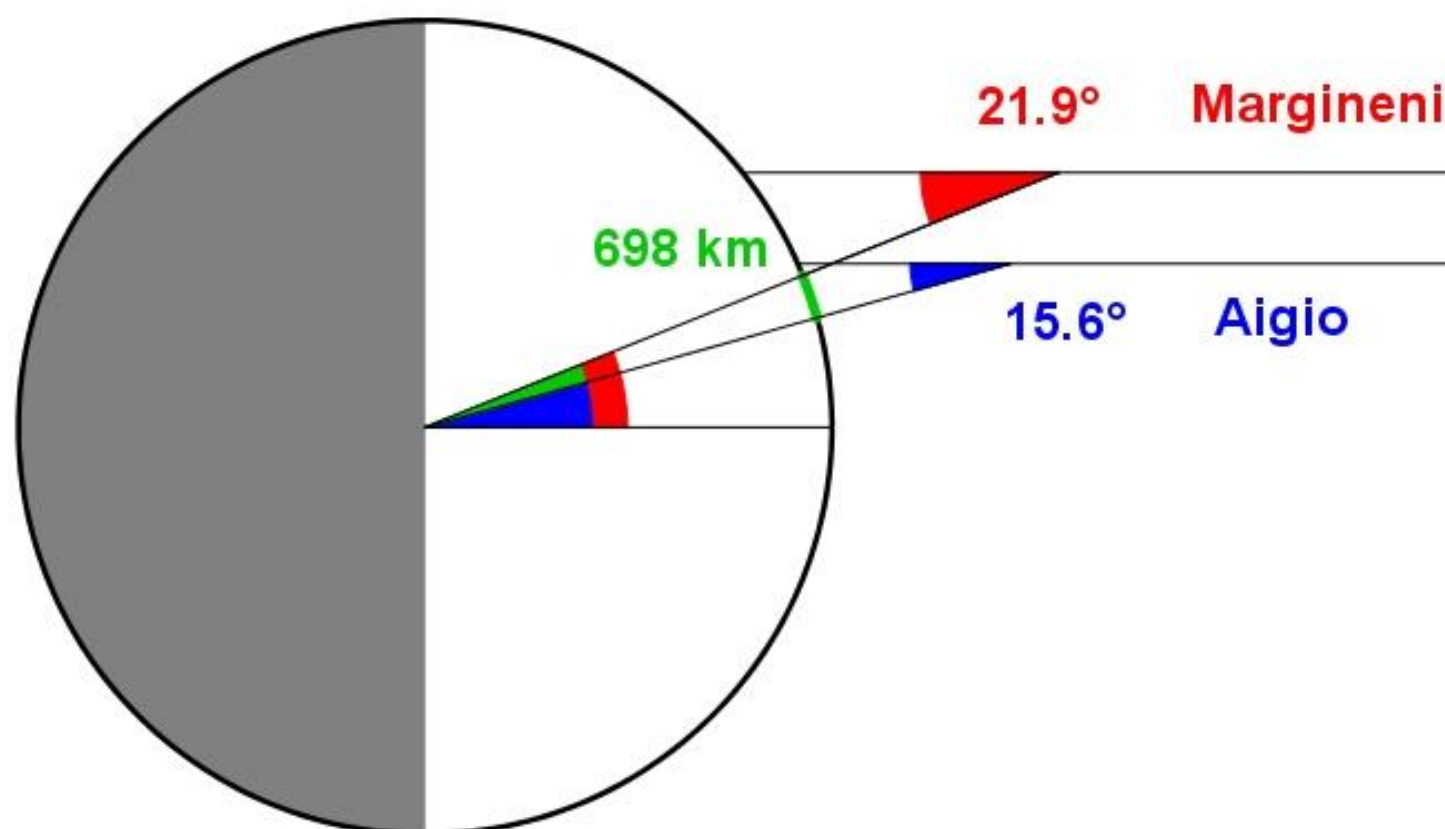


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554

Date	Gnomon	Shadow	Angle
06 June	100 cm	40.1 cm	21.9 °
07 June	100 cm	40 cm	21.8 °
08 June	100 cm	40 cm	21.8 °
09 June	100 cm	40.3 cm	21.9 °
15 June	100 cm	39.8 cm	21.7 °
16 June	100 cm	39.6 cm	21.6 °
20 June	100 cm	40.0 cm	21.8 °
21 June	100 cm	40.6 cm	22.1 °

06 June 2017 (Margineni-ROMANIA) Latitude: 44.533°

06 June 2017 (Aigio-GREECE) Latitude: 38.252°



$$\text{circumference} = \frac{360^\circ \times 698 \text{ km}}{21.9^\circ - 15.6^\circ} = 39886 \text{ km}$$



School Gh. Popescu, ROMANIA, 03.06.2017



School Gh. Popescu, ROMANIA 16 iunie 2017

Marseille, France

June 2017

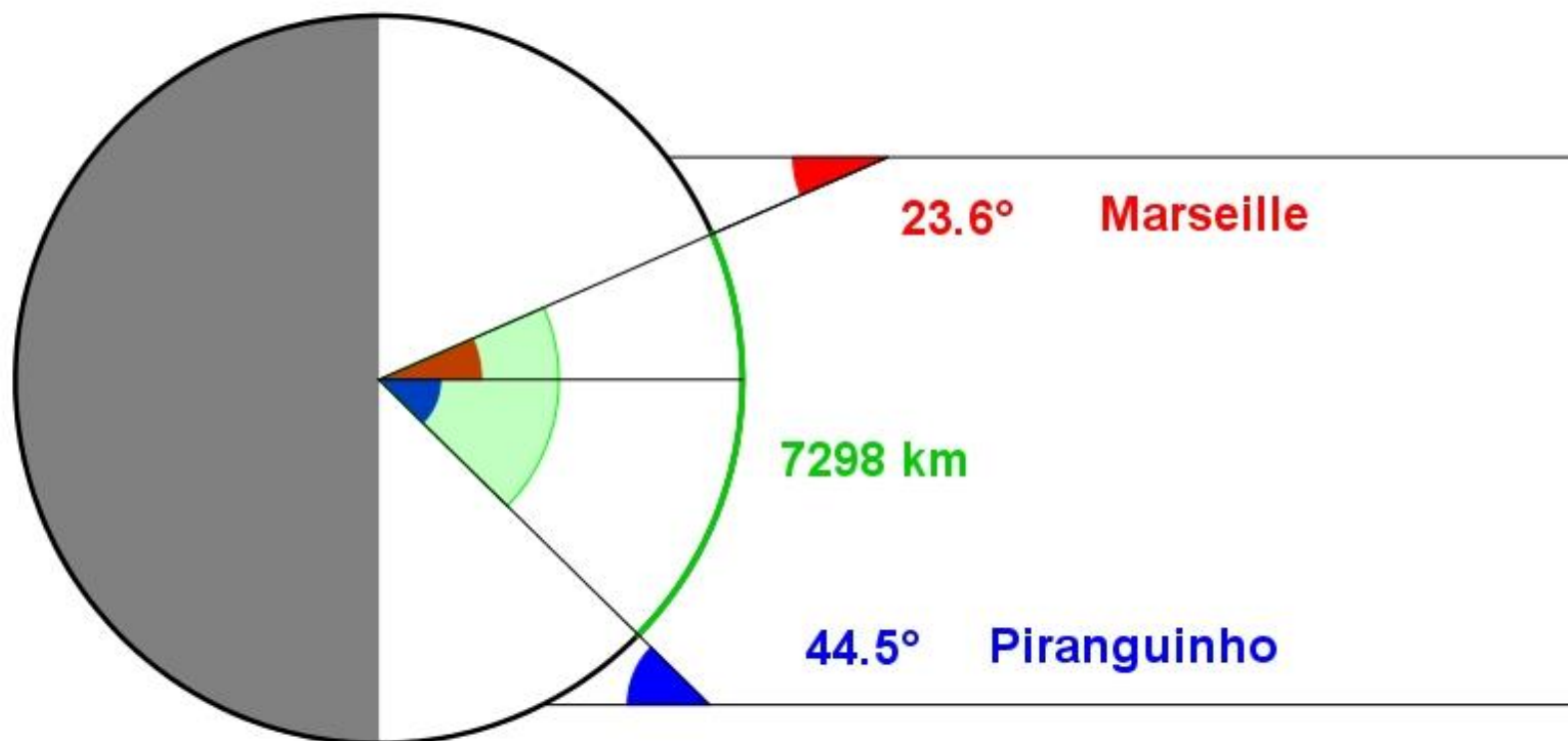


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Marseille	France	Palais des Congrès	43.277	5.395

Date	Gnomon	Shadow	Angle
01 June	16 cm	7 cm	23.6 °

01 June 2017 (Marseille-FRANCE) Latitude: 43.277°

01 June 2017 (Piranguinho-BRAZIL) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7298 \text{ km}}{23.6^\circ + 44.5^\circ} = 38580 \text{ km}$$



Meghpar, India

June 2017

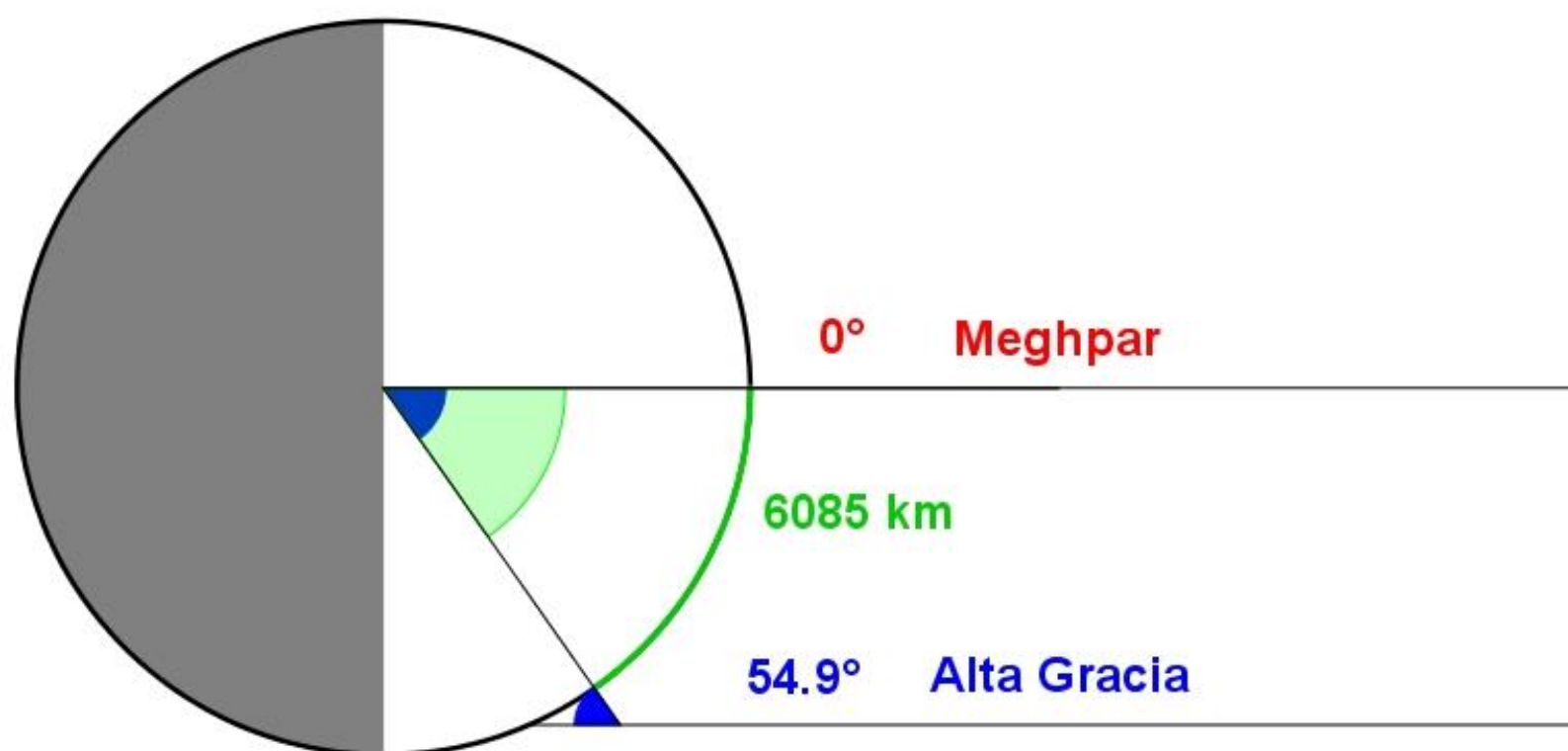


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Meghpar	India	Meghpar school	23.114	69.559

Date	Gnomon	Shadow	Angle
12 June	100 cm	0 cm	0 °

12 June 2017 (Meghpar-INDIA) Latitude: 23.114°

12 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 6085 \text{ km}}{0^\circ + 54.9^\circ} = 39902 \text{ km}$$



Mumbai, India

June 2017

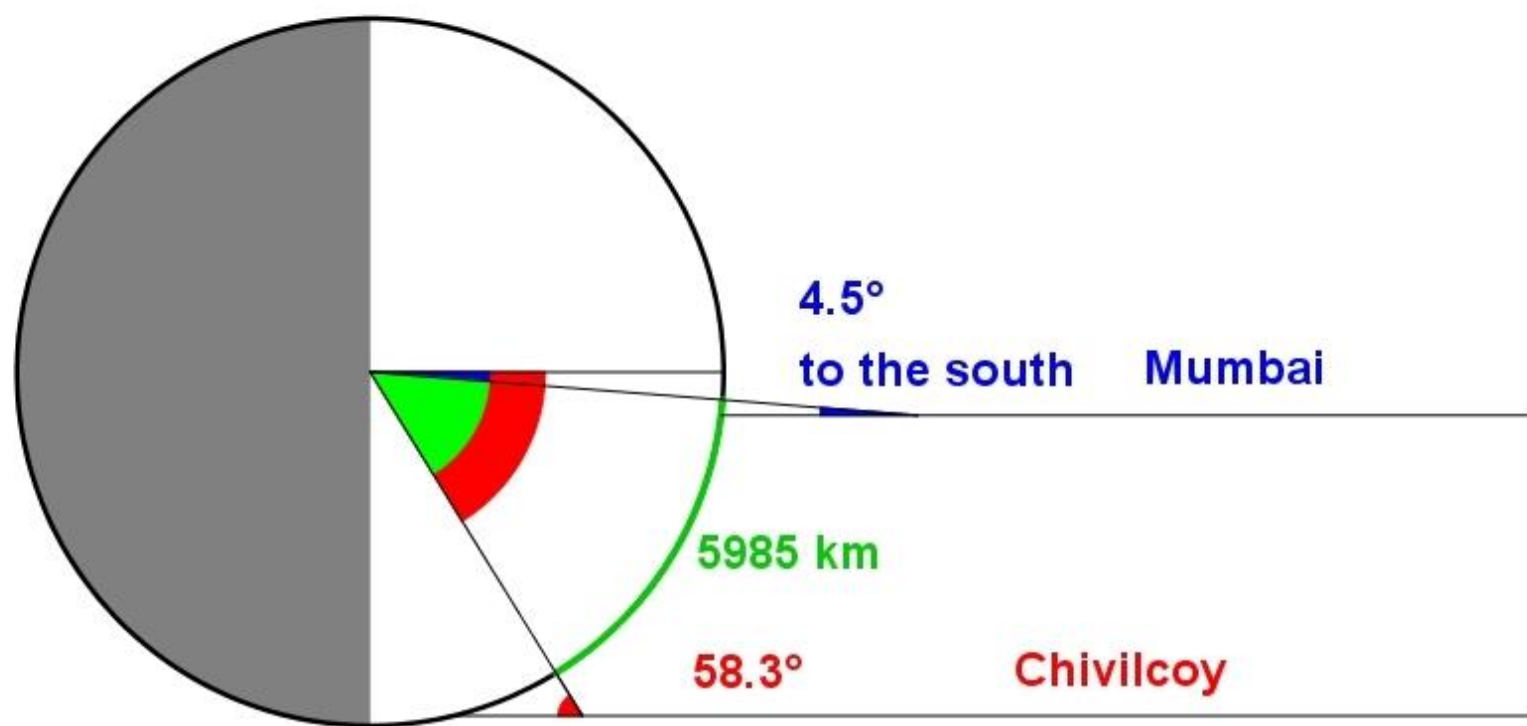


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Mumbai	India	Marwari Vidyalaya High School	18.957	72.818

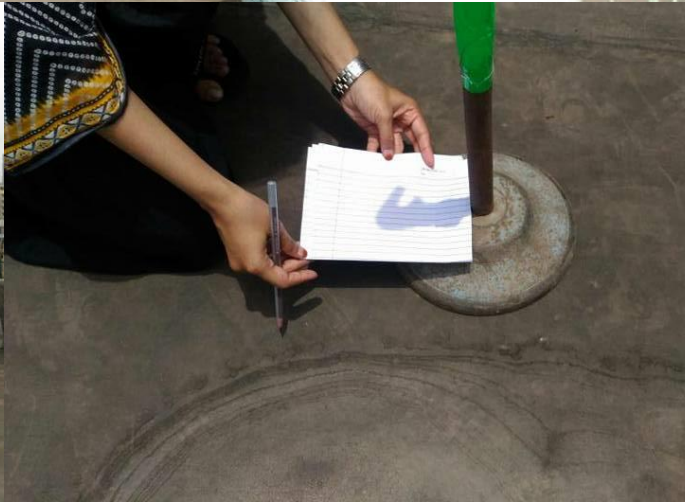
Date	Gnomon	Shadow	Angle
21 June	82.5 cm	-6.5 cm	-4.5 °

21 June 2017 (Chivilcoy-ARGENTINA) Latitude: -34.911°

21 June 2017 (Mumbai-INDIA) Latitude: 18.957°



circumference = $\frac{360^\circ \times 5985 \text{ km}}{58.3^\circ - 4.5^\circ} = 40048 \text{ km}$



Naranpar, India

June 2017

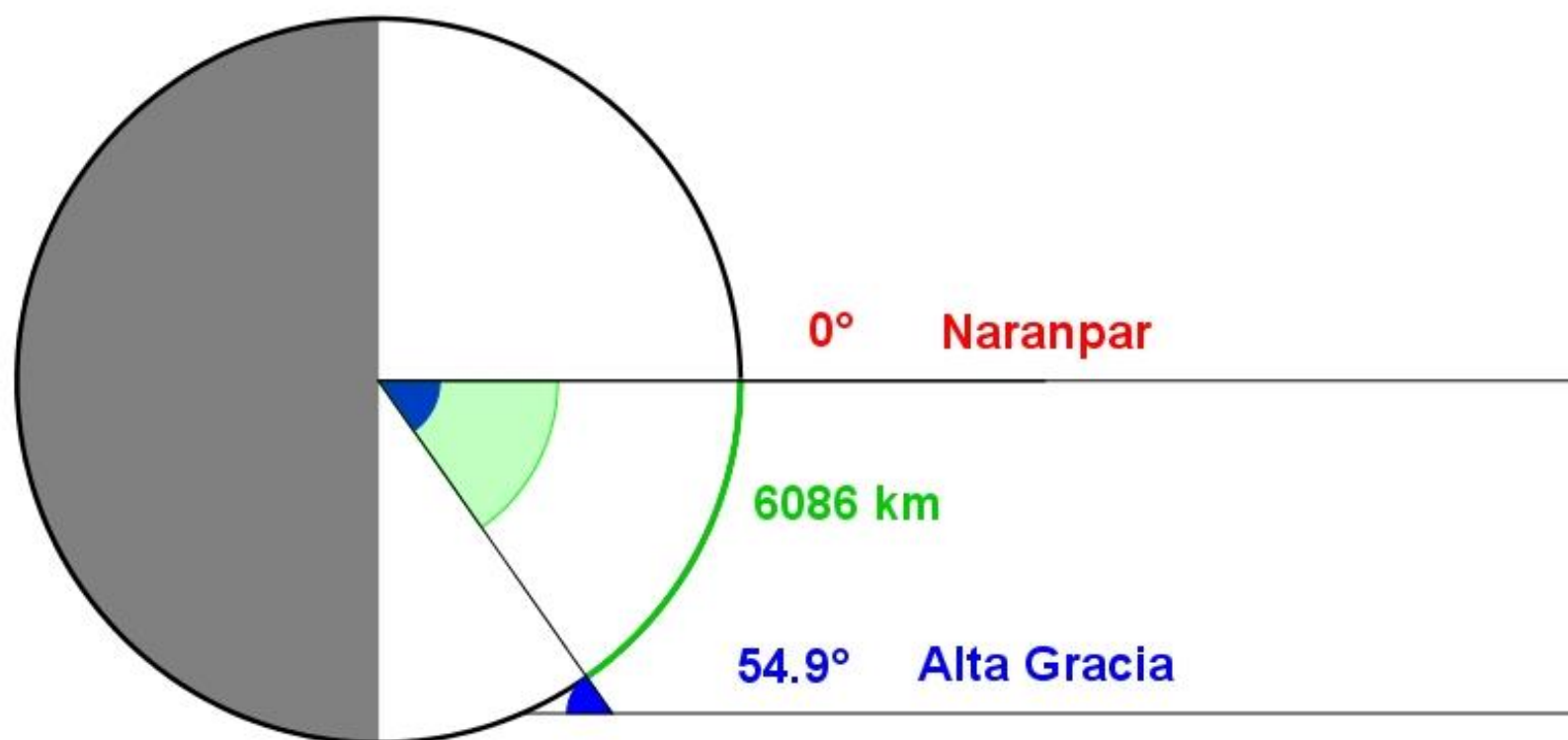


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Naranpar	India	Naranpar school	23.121	69.589

Date	Gnomon	Shadow	Angle
12 June	100 cm	0 cm	0 °

12 June 2017 (Naranpar-INDIA) Latitude: 23.121°

12 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 6086 \text{ km}}{0^\circ + 54.9^\circ} = 39908 \text{ km}$$



Petroupoli, Greece

June 2017

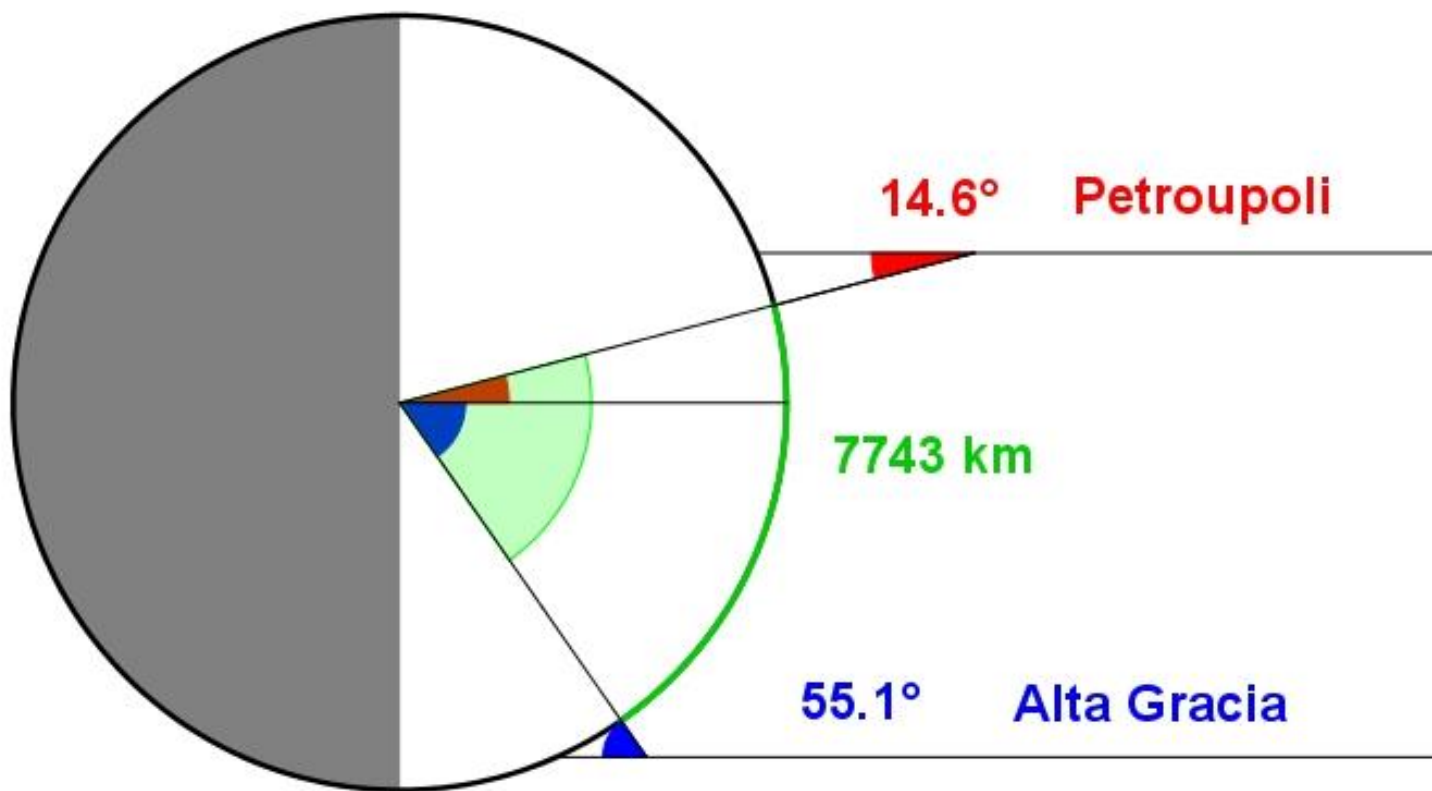


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Petroupoli	Greece	4o Junior High School	38.036	23.674

Date	Gnomon	Shadow	Angle
02 June	52.3 cm	14.2 cm	15.2 °
13 June	52.3 cm	13.6 cm	14.6 °
16 June	52.3 cm	13.6 cm	14.6 °
20 June	52.3 cm	13.6 cm	14.6 °

13 June 2017 (Petroupoli-GREECE) Latitude: 38.036°

13 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 7743 \text{ km}}{14.6^\circ + 55.1^\circ} = 39993 \text{ km}$$



Piraeus, Greece

June 2017

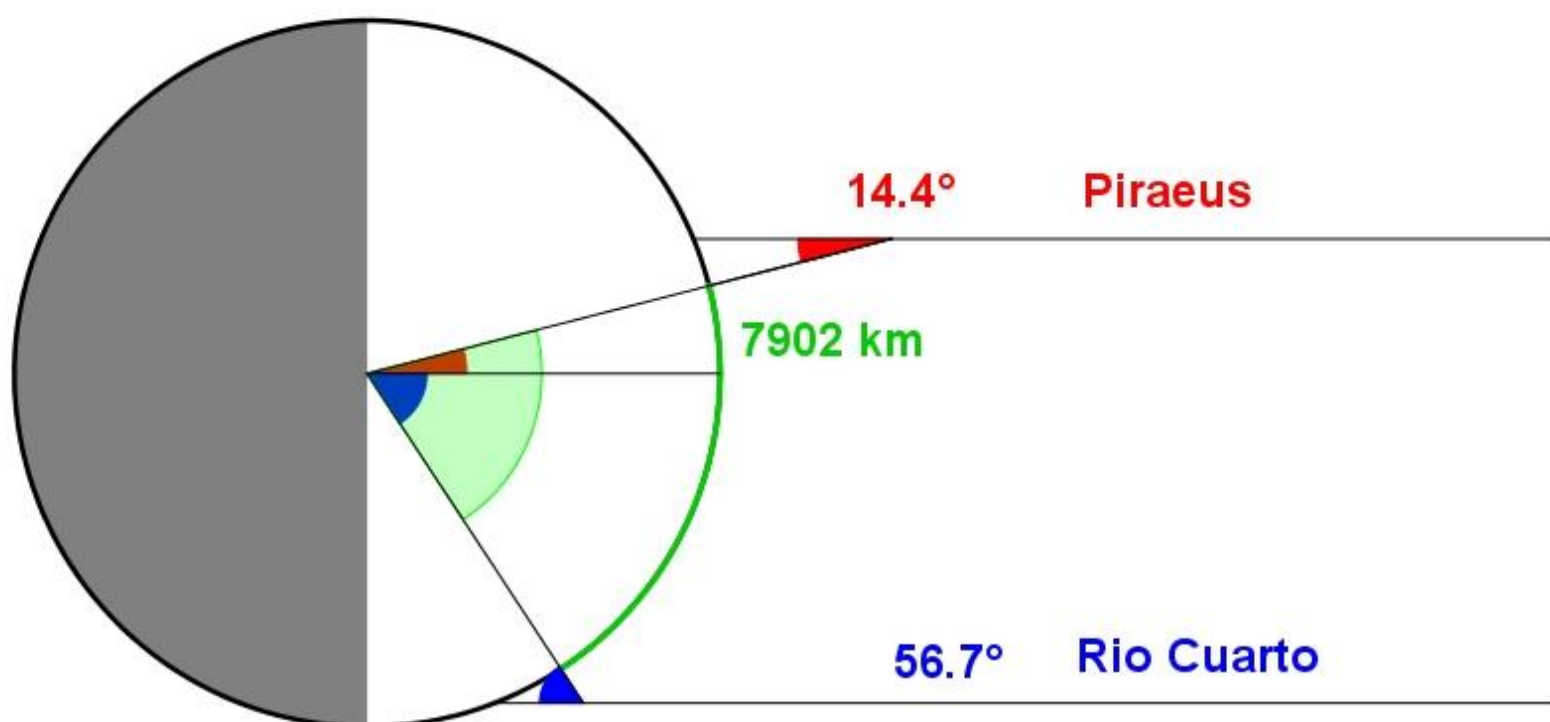


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655

Date	Gnomon	Shadow	Angle
13 June	100 cm	25.5 cm	14.3 °
21 June	100 cm	25.7 cm	14.4 °

21 June 2017 (Piraeus-GREECE) Latitude: 37.977°

21 June 2017 (Rio Cuarto-ARGENTINA) Latitude: -33.149°



$$\text{circumference} = \frac{360^\circ \times 7902 \text{ km}}{14.4^\circ + 56.7^\circ} = 40010 \text{ km}$$



Piranguinho, Brazil

June 2017

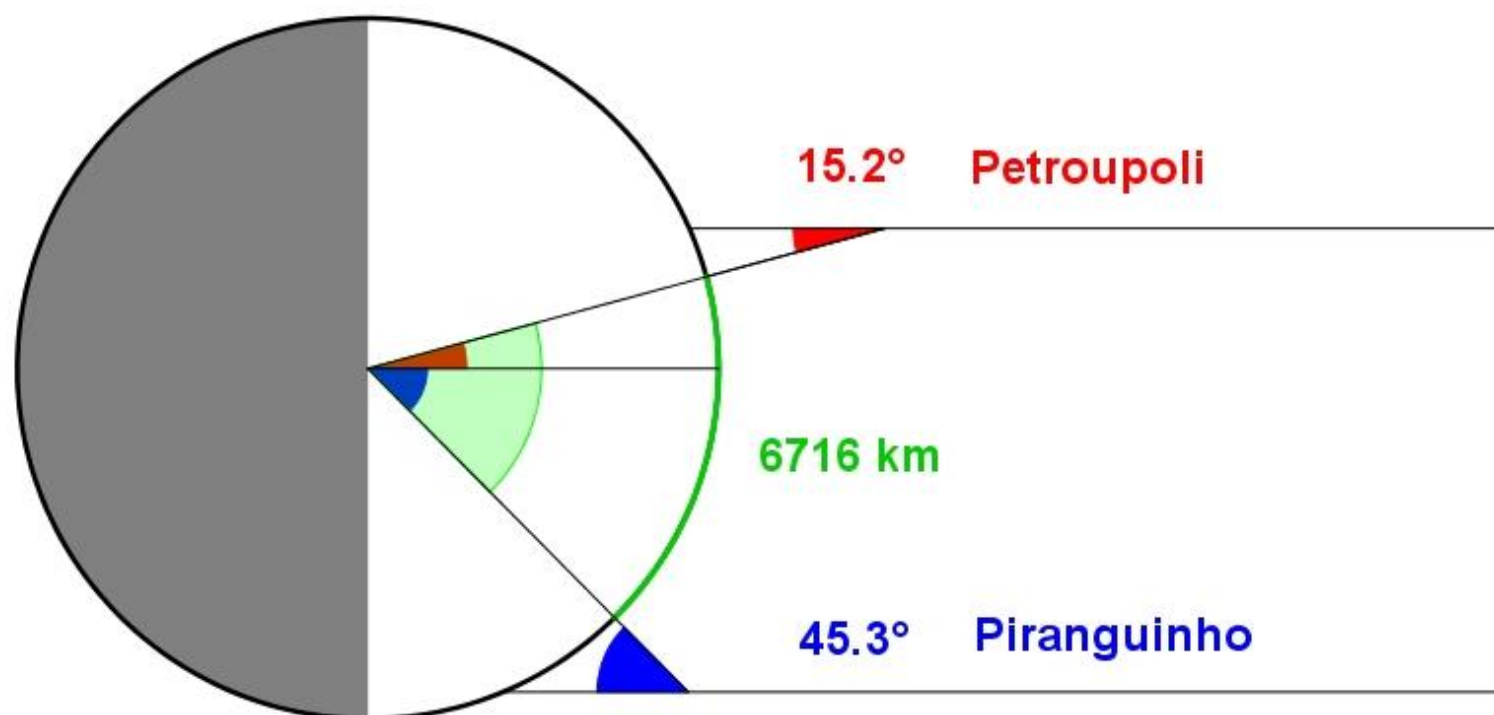


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piranguinho	Brazil	Universidade Federal de Itajubá	-22.411	-45.535

Date	Gnomon	Shadow	Angle
01 June	70 cm	-68.8 cm	-44.5 °
02 June	70 cm	-70.7 cm	-45.3 °
05 June	70 cm	-71 cm	-45.4 °
08 June	70 cm	-71.8 cm	-45.7 °
09 June	70 cm	-72 cm	-45.8 °
13 June	70 cm	-72.9 cm	-46.2 °
14 June	70 cm	-73.4 cm	-46.4 °
15 June	70 cm	-73.3 cm	-46.3 °
17 June	70 cm	-73.2 cm	-46.3 °
19 June	70 cm	-73.4 cm	-46.4 °
20 June	70 cm	-73.2 cm	-45.9 °
22 June	70 cm	-73 cm	-46.2 °
23 June	70 cm	-73.1 cm	-46.2 °
28 June	70 cm	-73.3 cm	-46.3 °

02 June 2017 (Petroupoli-GREECE) Latitude: 38.036°

02 June 2017 (Piranguinho-BRAZIL) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 6716 \text{ km}}{15.2^\circ + 45.3^\circ} = 39963 \text{ km}$$



Popayan, Colombia

June 2017

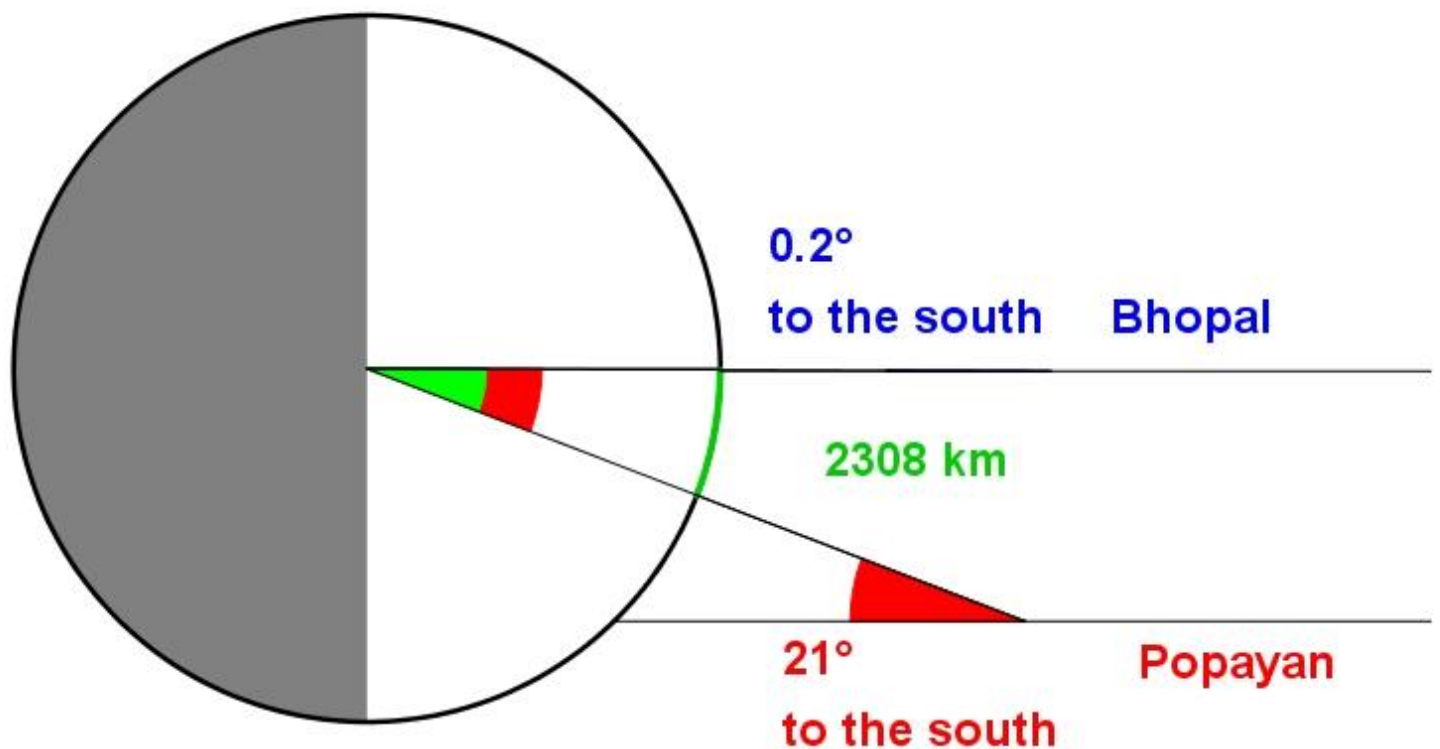


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Popayan	Colombia	I.E. Gabriela Mistral	2.471	-76.579

Date	Gnomon	Shadow	Angle
21 June	100 cm	-38.3 cm	-21 °

21 June 2017 (Popayan-COLOMBIA) Latitude: 2.471°

21 June 2017 (Bhopal-INDIA) Latitude: 23.246°



$$\text{circumference} = \frac{360^\circ \times 2308 \text{ km}}{21^\circ - 0.2^\circ} = 39946 \text{ km}$$



Río Cuarto, Argentina

June 2017

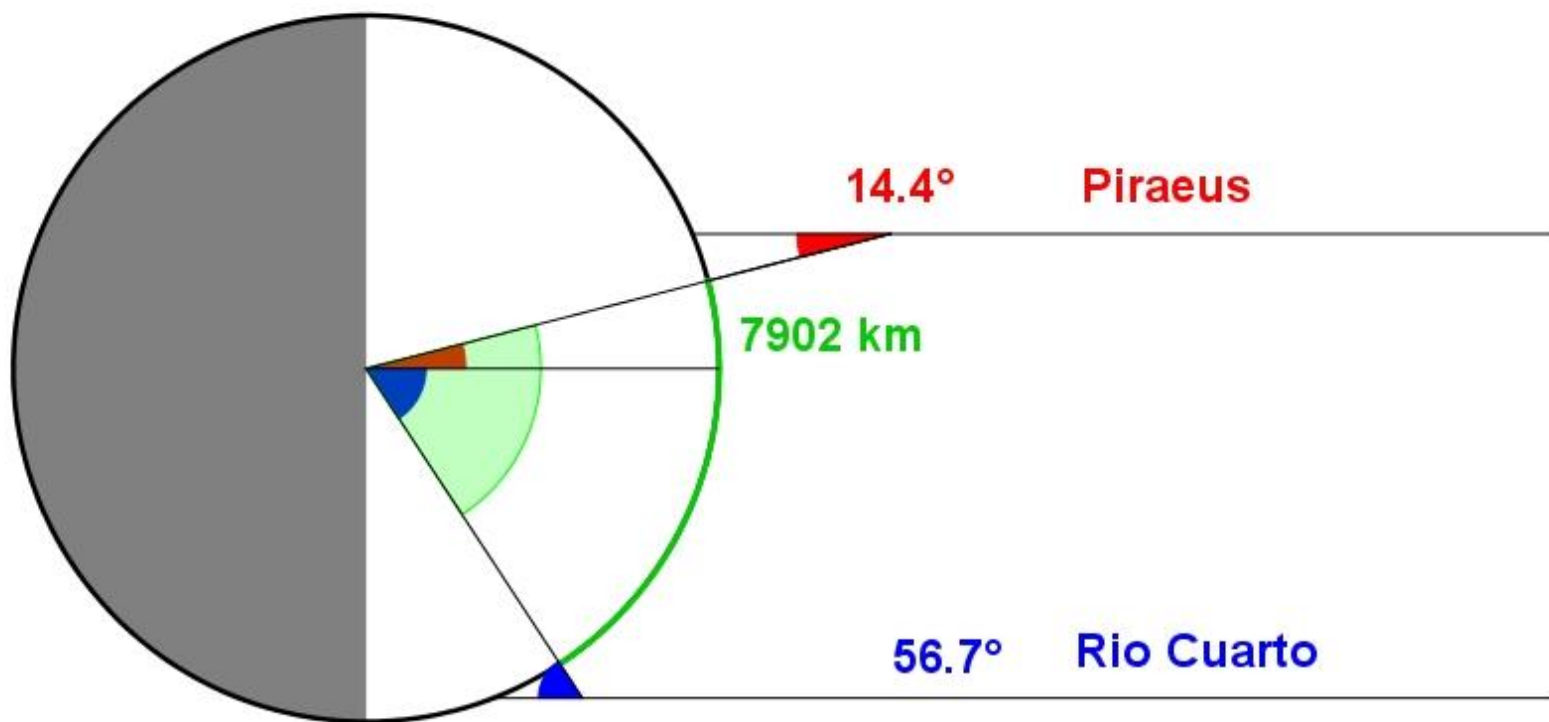


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Río Cuarto	Argentina	Colegio Concordia	-33.149	-64.351

Date	Gnomon	Shadow	Angle
21 June	53.5 cm	-81.6 cm	-56.7 °

21 June 2017 (Piraeus-GREECE) Latitude: 37.977°

21 June 2017 (Rio Cuarto-ARGENTINA) Latitude: -33.149°



$$\text{circumference} = \frac{360^\circ \times 7902 \text{ km}}{14.4^\circ + 56.7^\circ} = 40010 \text{ km}$$



Râmnicu Vâlcea, Romania

June 2017

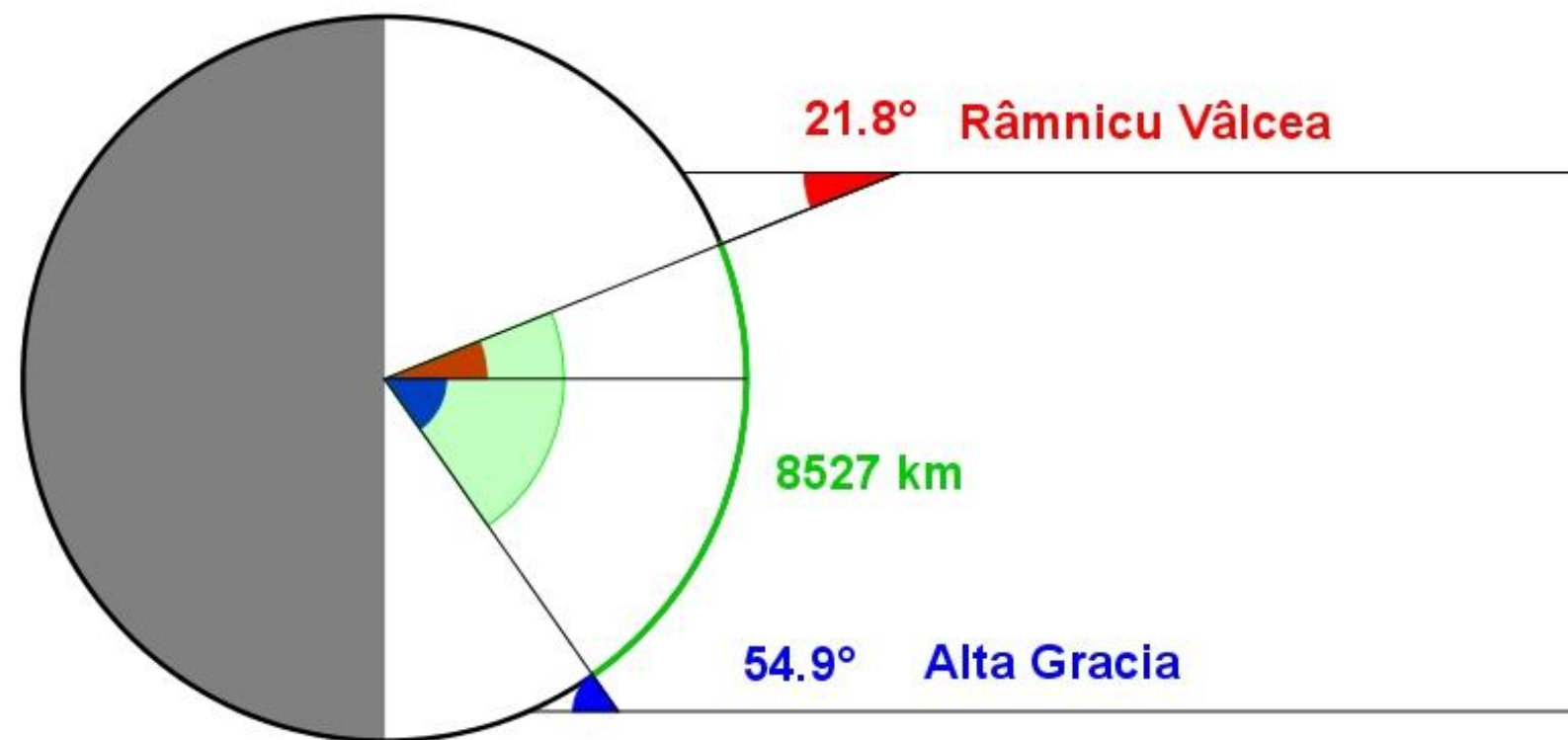


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Râmnicu Vâlcea	Romania	S.G. Nr4 Gradinita Dumbrava Minuata	45.093	24.358

Date	Gnomon	Shadow	Angle
06 June	51 cm	20.9 cm	22.3 °
07 June	51 cm	20.8 cm	22.2 °
12 June	51 cm	20.4 cm	21.8 °
14 June	51 cm	20.4 cm	21.8 °
16 June	51 cm	20.3 cm	21.7 °

12 June 2017 (Râmnicu Vâlcea-ROMANIA) Latitude: 45.093°

12 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 8527 \text{ km}}{21.8^\circ + 54.9^\circ} = 40022 \text{ km}$$



Rio de Janeiro Méier, Brazil

June 2017

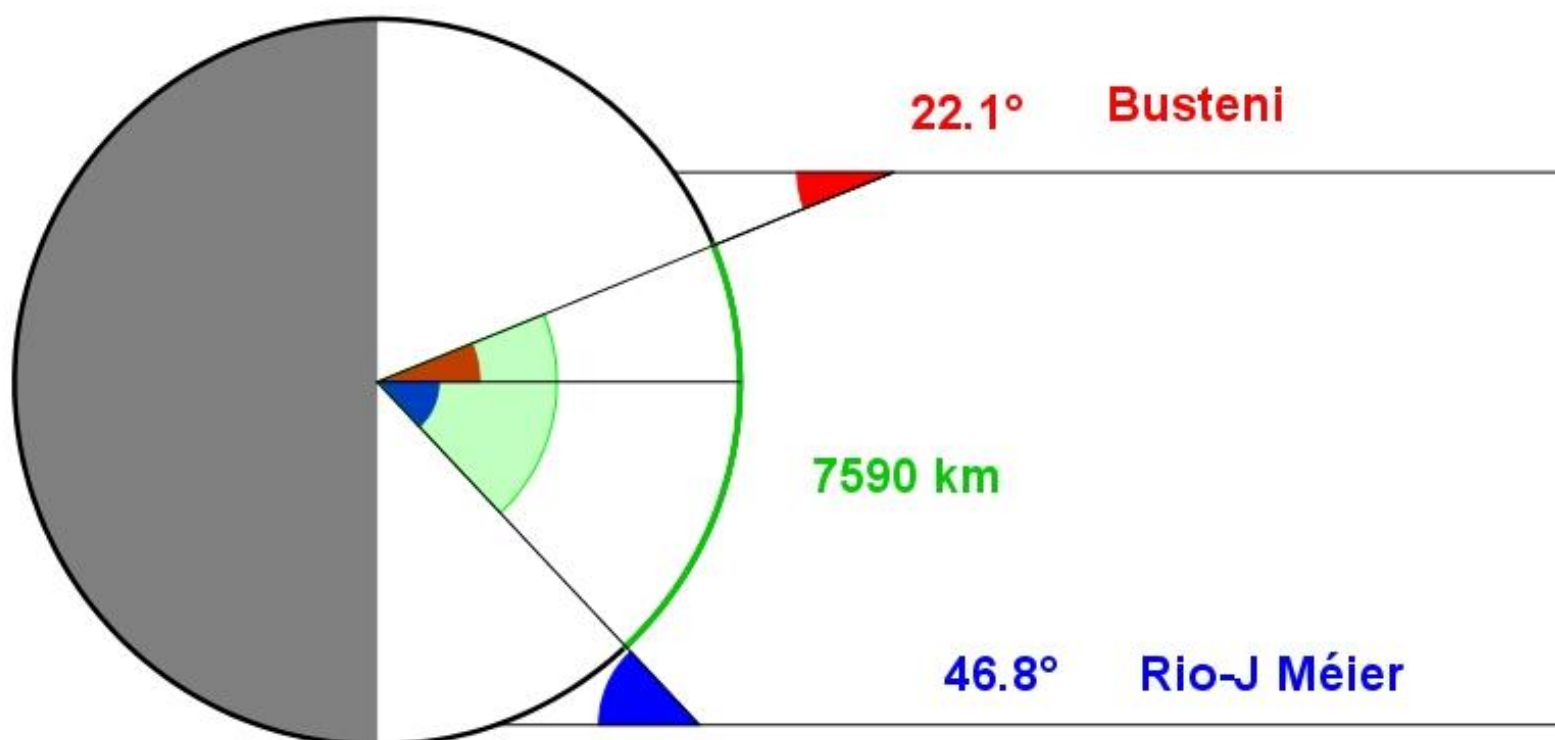


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Escola Municipal Bento Ribeiro, Méier	-22.904	-43.280

Date	Gnomon	Shadow	Angle
24 June	53 cm	-56.5 cm	-46.8 °

24 June 2017 (Busteni-ROMANIA) Latitude: 45.416°

24 June 2017 (Rio-J Méier-BRAZIL) Latitude: -22.904°



$$\text{circumference} = \frac{360^\circ \times 7590 \text{ km}}{22.1^\circ + 46.8^\circ} = 39657 \text{ km}$$



Rio de Janeiro CENOM, Brazil

June 2017

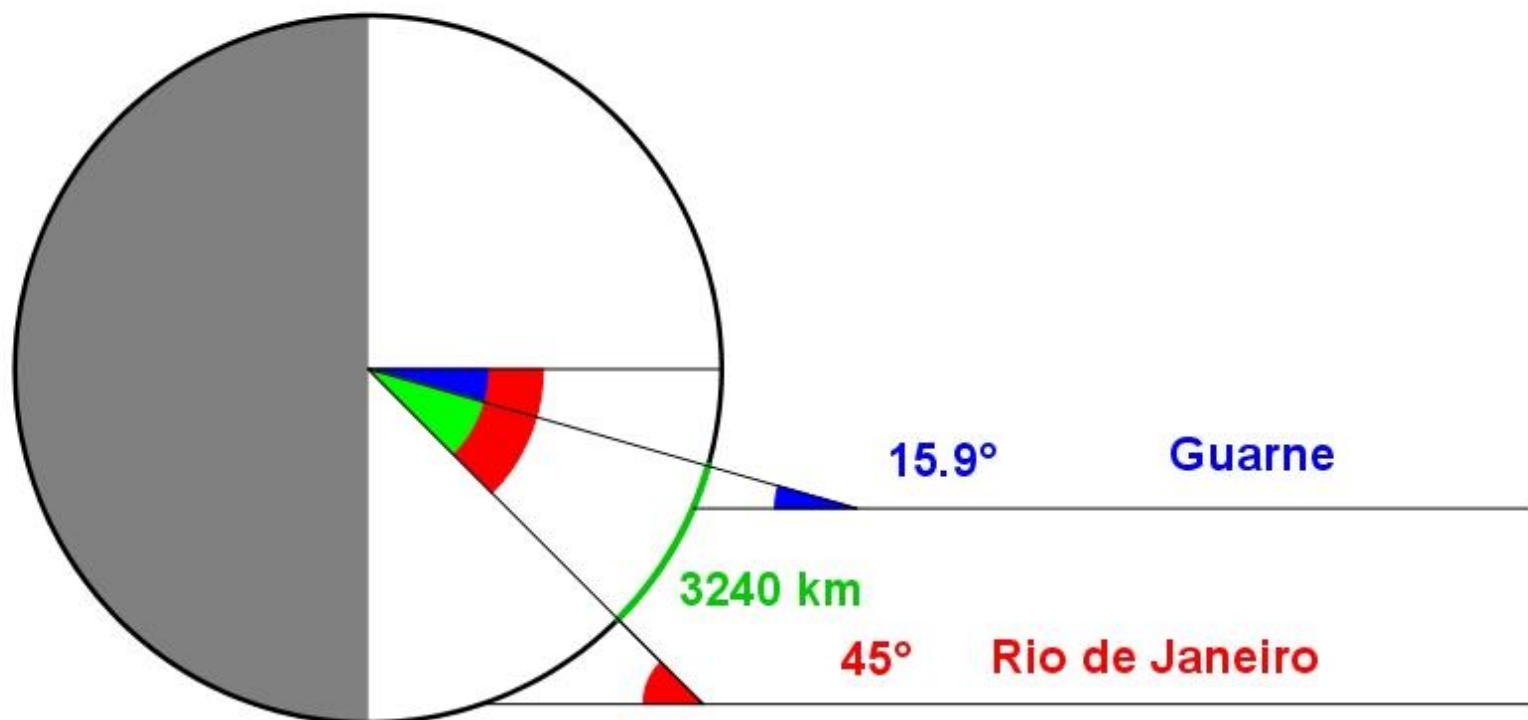


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
02 June	100 cm	-95 cm	-43.5 °
05 June	100 cm	-97 cm	-44.1 °
07 June	100 cm	-95 cm	-43.5 °
08 June	100 cm	-95 cm	-43.5 °
09 June	100 cm	-95 cm	-43.5 °
12 June	100 cm	-97 cm	-44.1 °
16 June	100 cm	-100 cm	-45.0 °
19 June	100 cm	-99 cm	-44.7 °
20 June	100 cm	-99 cm	-44.7 °
28 June	100 cm	-100 cm	-45.0 °
30 June	100 cm	-101 cm	-45.3 °

28 June 2017 (Rio de Janeiro-BRAZIL) Latitude: -22.89°

28 June 2017 (Guarne-COLOMBIA) Latitude: 6.274°



$$\text{circumference} = \frac{360^\circ \times 3240 \text{ km}}{45^\circ - 15.9^\circ} = 40082 \text{ km}$$



Tunis, Tunisia

June 2017

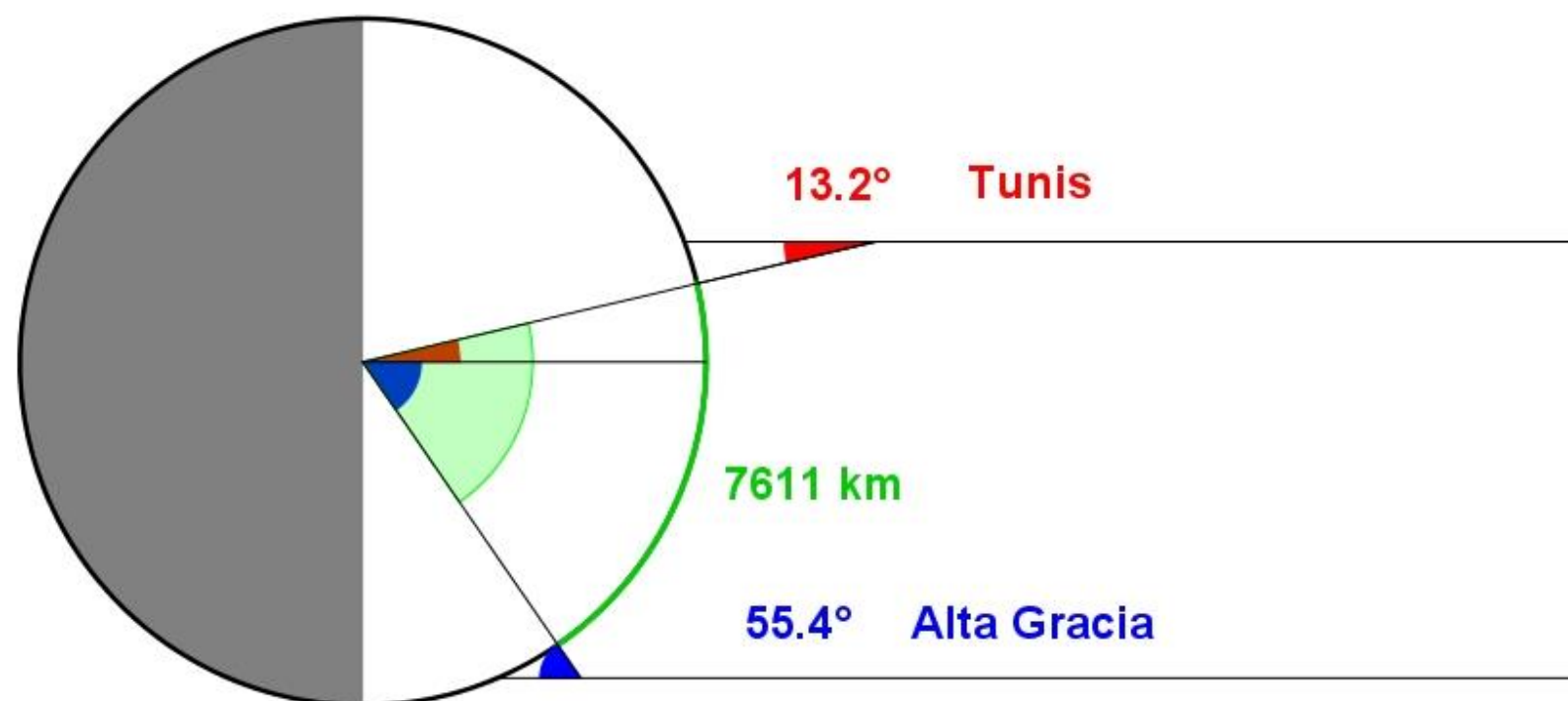


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Tunis	Tunisia	Cité des Sciences	36.850	10.190

Date	Gnomon	Shadow	Angle
18 June	100 cm	23.5 cm	13.2 °

18 June 2017 (Tunis-TUNISIA) Latitude: 36.85°

18 June 2017 (Alta Gracia-ARGENTINA) Latitude: -31.659°



$$\text{circumference} = \frac{360^\circ \times 7611 \text{ km}}{13.2^\circ + 55.4^\circ} = 39941 \text{ km}$$

