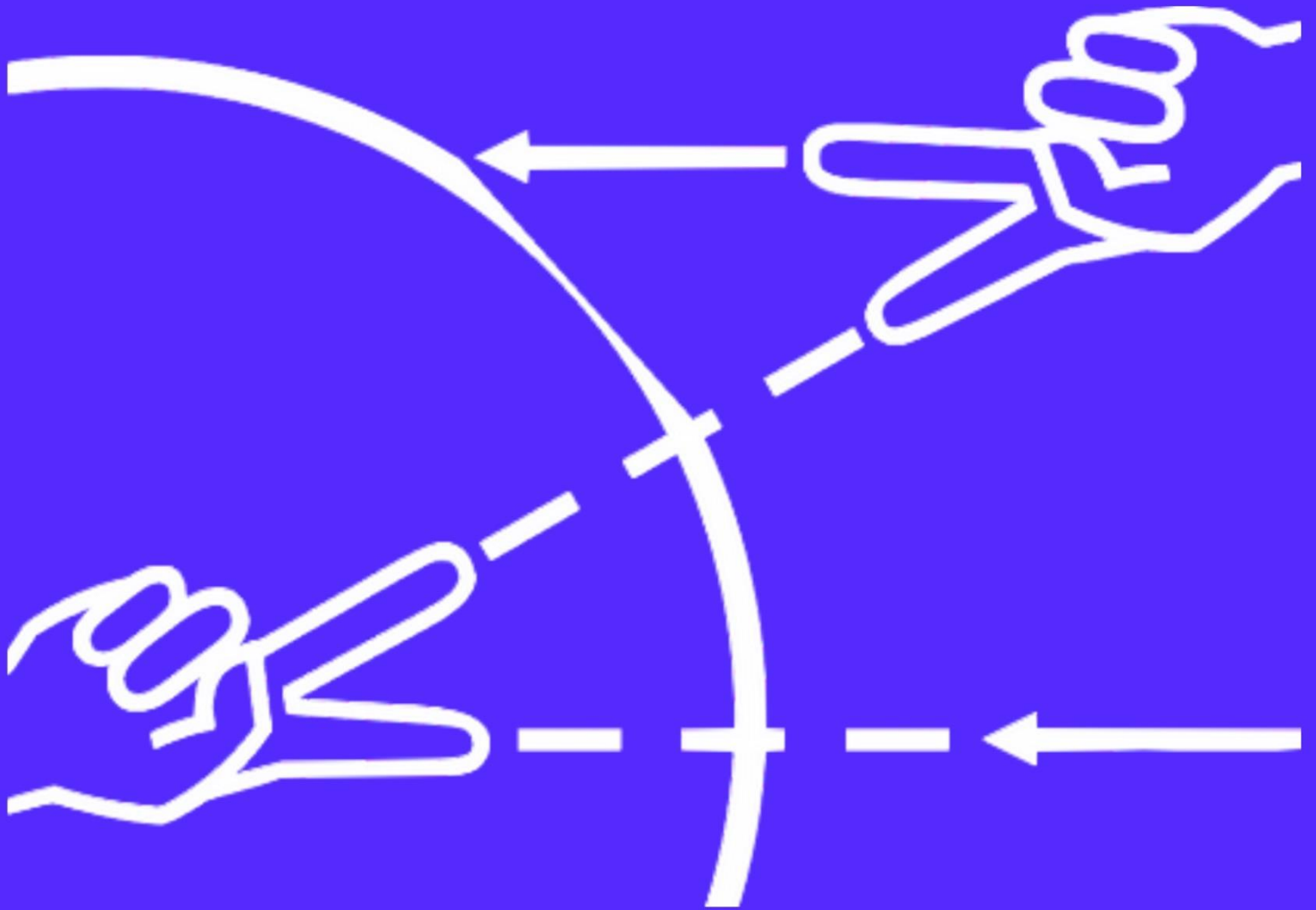


Eratostrhenes



4
Continents

10
Countries

22
Schools

89
Measures

N°34

October 2018

4 Continents

10 Countries

22 Schools

89 Measures

ARGENTINA (1)

Alta Gracia

BRAZIL (3)

Itajubá, Piranguinho, Rio de Janeiro

COLOMBIA (2)

Rionegro, Yarumal

CROATIA (2)

Brštanovo, Donji Muć

FRANCE (1)

Lafrançaise

GREECE (5)

Aigio, Athens, Petroupoli, Piraeus, Pylos

INDIA(2)

Lucknow, Yamunanagar

MALAYSIA(1)

Kuantan

ROMANIA (4)

Busteni, Dohoroi, Margineni, Pogana

TUNISIA (1)

Bizerte

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
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726
	Bizerte	Tunisia	Ecole Primaire Raouabi	37.284	9.868
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535
	Donji Muć	Croatia	oš kneza Branimira	43.694	16.462
	Dorohoi	Romania	Grigore Ghica National College	47.953	26.394
	Itajubá	Brazil	Universidade Federal de Itajubá	-22.415	-45.449
	Kuantan	Malaysia	SMK Semambu	3.870	103.325
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237
	Lucknow	India	Indira Gandhi Pratishthan	26.869	81.008
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554
	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
	Pogana	Romania	Scoala Gimnaziala Nr.1 Pogana	46.313	27.575
	Pylos	Greece	1st Kindergarten of Pylos	36.911	21.694
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317
	Rionegro	Colombia	Colegio Campestre San Nicolás	6.163	-75.359
	Yamunanagar	India	DIE&T Tejli	30.134	77.310
	Yarumal	Colombia	Institución Educativa San Luis	6.966	-75.416

Aigio, Greece

October 2018

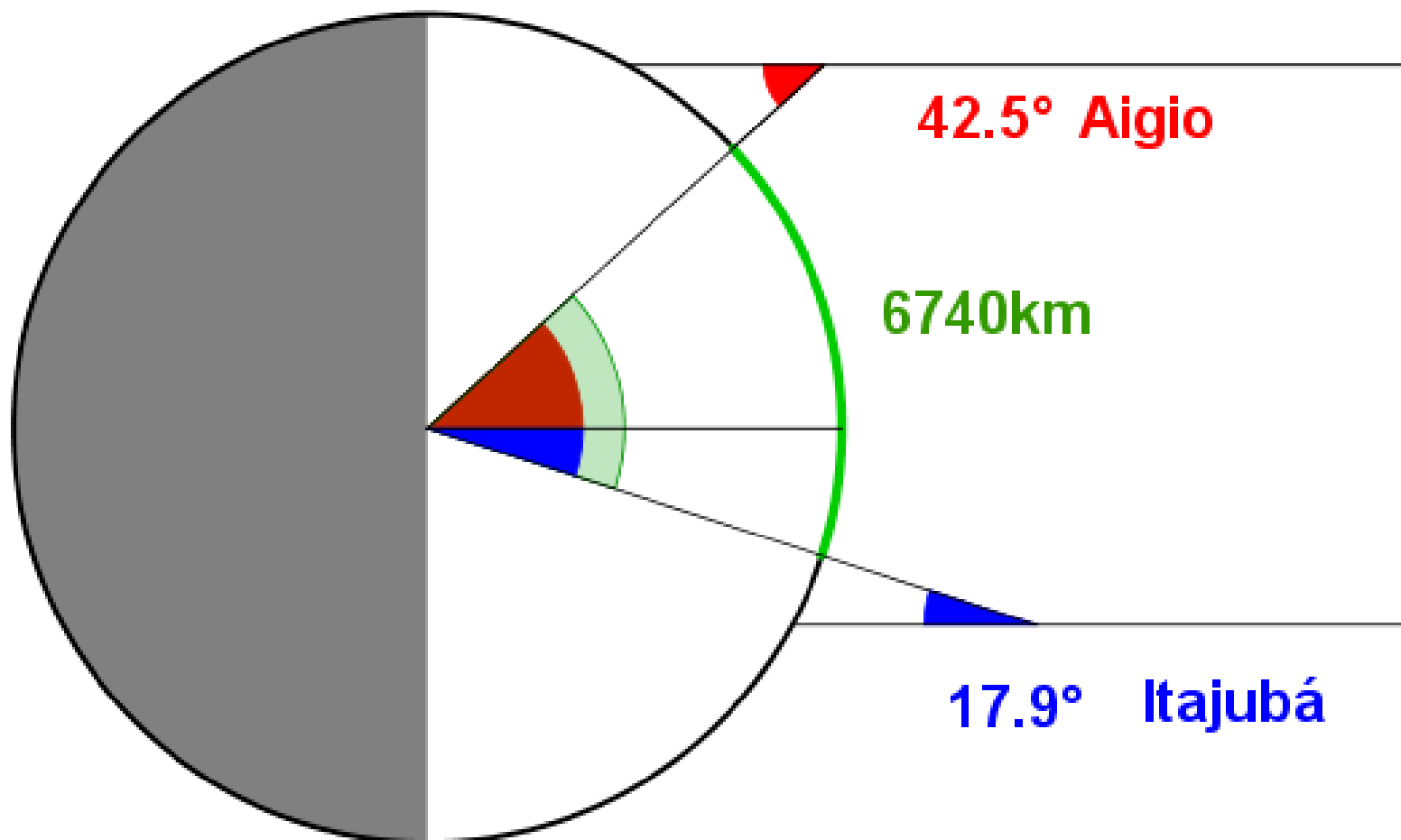


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079

Date	Gnomon	Shadow	Angle
02 October 2018	30 cm	28 cm	43 °
04 October 2018	30.0 cm	27.5 cm	42.5 °

04/10/2018 (Aigio-Greece) Latitude: 38.252°

04/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 6740\text{km}}{42.5^\circ + 17.9^\circ} = 40172 \text{ km}$$



Alta Gracia, Argentina

October 2018

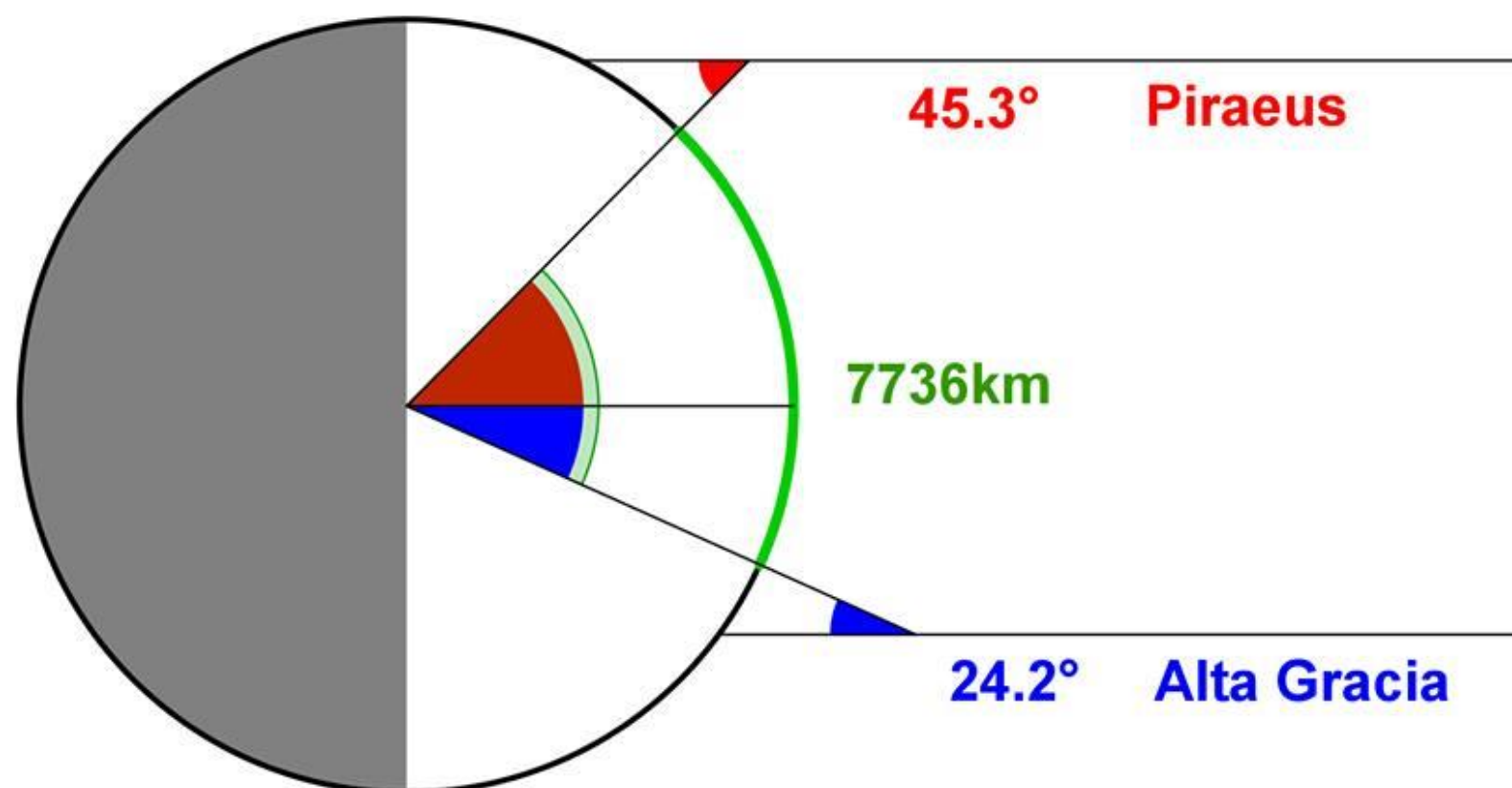


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Alta Gracia	Argentina	Fundación Caminos de Anisacate	-31.659	-64.417

Date	Gnomon	Shadow	Angle
04 October 2018	36.0 cm	-17.8 cm	-26.3 °
06 October 2018	38.0 cm	-18.5 cm	-26.0 °
08 October 2018	39.0 cm	-18.2 cm	-25.0 °
09 October 2018	39.0 cm	-17.9 cm	-24.7 °
10 October 2018	39.0 cm	-17.5 cm	-24.2 °
12 October 2018	39.0 cm	-17.0 cm	-23.6 °
15 October 2018	39 cm	-16 cm	-22.3 °

10/10/2018 (Piraeus-Greece) Latitude: 37.977°

10/10/2018 (Alta Gracia-Argentina) Latitude: -31.658°



$$\text{circumference} = \frac{360^\circ \times 7736\text{km}}{45.3^\circ + 24.2^\circ} = 40071 \text{ km}$$



Athens, Greece

October 2018

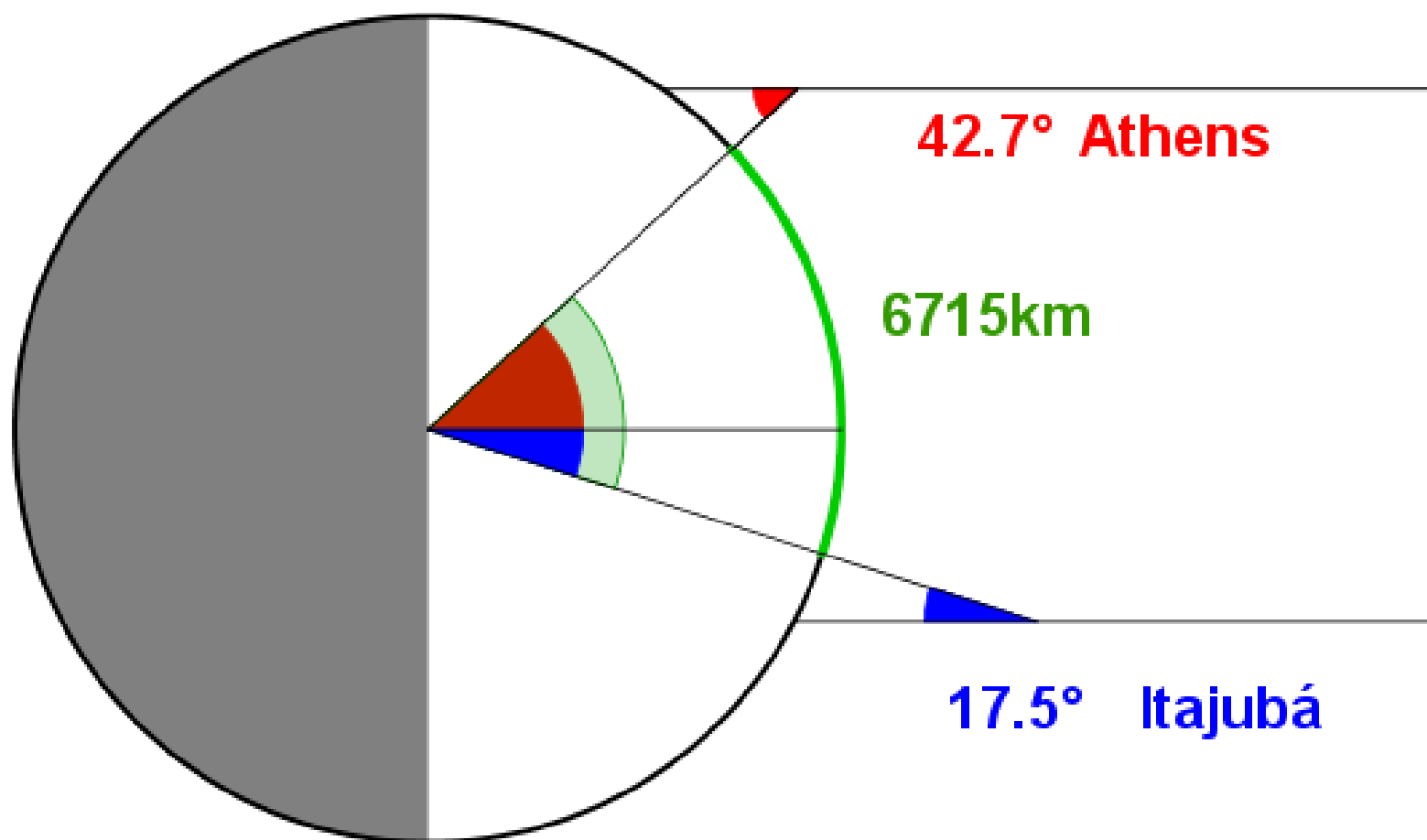


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
05 October 2018	246.0 cm	227.0 cm	42.7 °

05/10/2018 (Athens-Greece) Latitude: 38.027°

05/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 6715\text{km}}{42.7^\circ + 17.5^\circ} = 40156 \text{ km}$$



Bizerte, Tunisia

October 2018

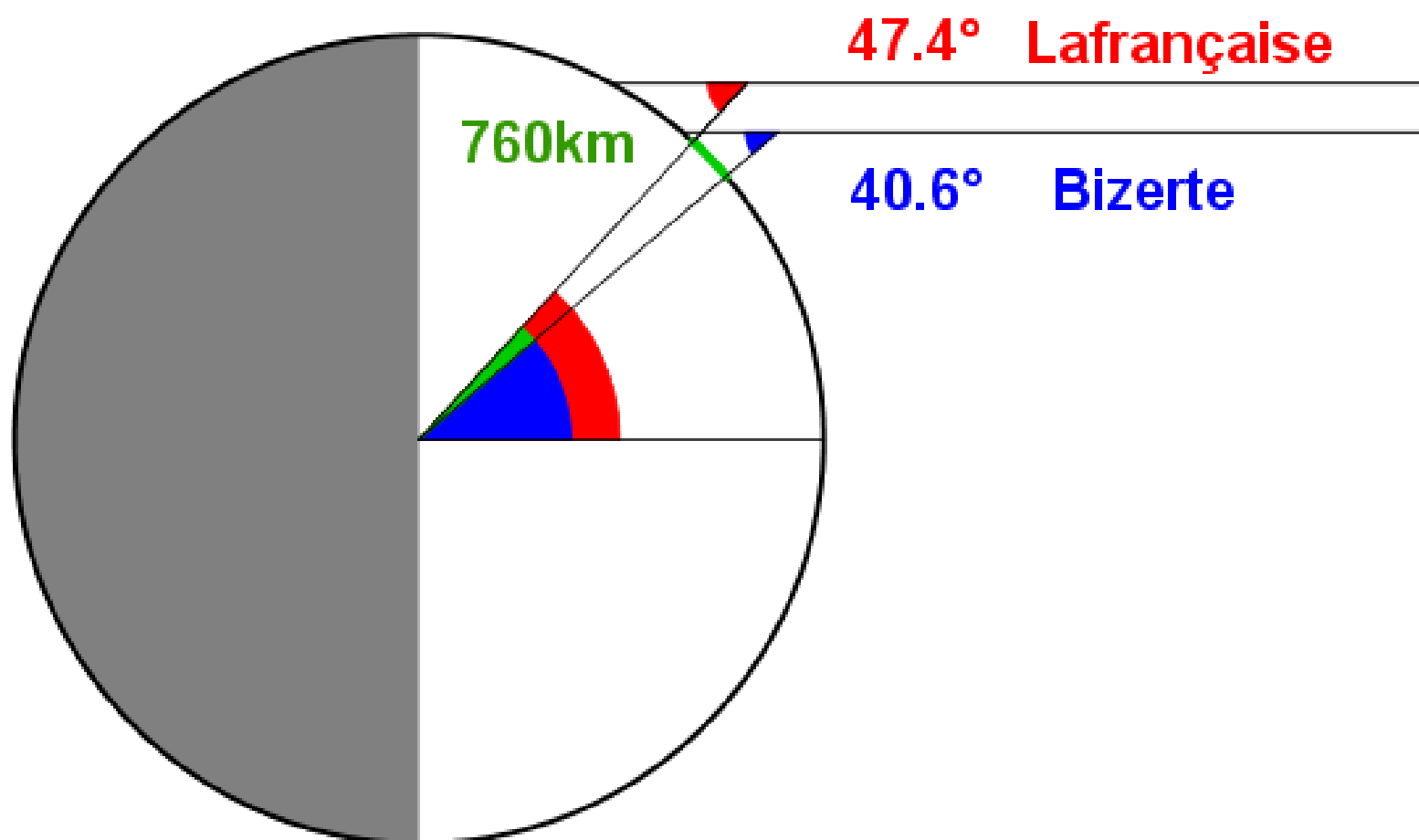


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bizerte	Tunisia	Ecole Primaire Raouabi	37.284	9.868

Date	Gnomon	Shadow	Angle
01 October 2018	73 cm	62.5 cm	40.6 °
08 October 2018	79 cm	67 cm	40.3 °

01/10/2018 (Lafrançaise-France) Latitude: 44.127°

01/10/2018 (Bizerte-Tunisia) Latitude: 37.284°



$$\text{circumference} = \frac{360^\circ \times 760\text{km}}{47.4^\circ - 40.6^\circ} = 40235 \text{ km}$$



Brštanovo, Croatia

October 2018

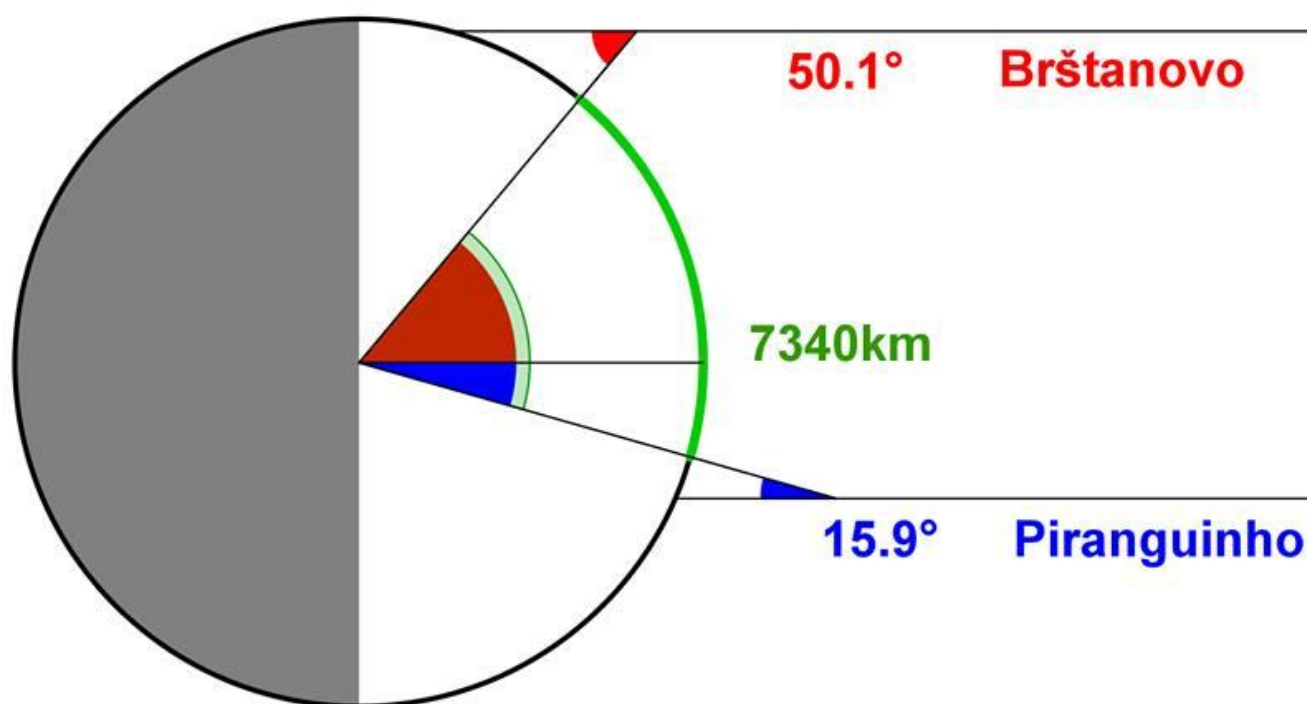


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415

Date	Gnomon	Shadow	Angle
01 October 2018	32 cm	36.5 cm	48.8 °
02 October 2018	32 cm	38.2 cm	50 °
03 October 2018	32 cm	35 cm	47.6 °
09 October 2018	32.0 cm	38.8 cm	50.5 °
10 October 2018	32.0 cm	38.3 cm	50.1 °
17 October 2018	32.0 cm	42.3 cm	52.9 °
23 October 2018	32 cm	45.4 cm	54.8 °

10/10/2018 (Brštanovo-Croatia) Latitude: 43.658°

10/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7340\text{km}}{50.1^\circ + 15.9^\circ} = 40036 \text{ km}$$



Busteni, Romania

October 2018

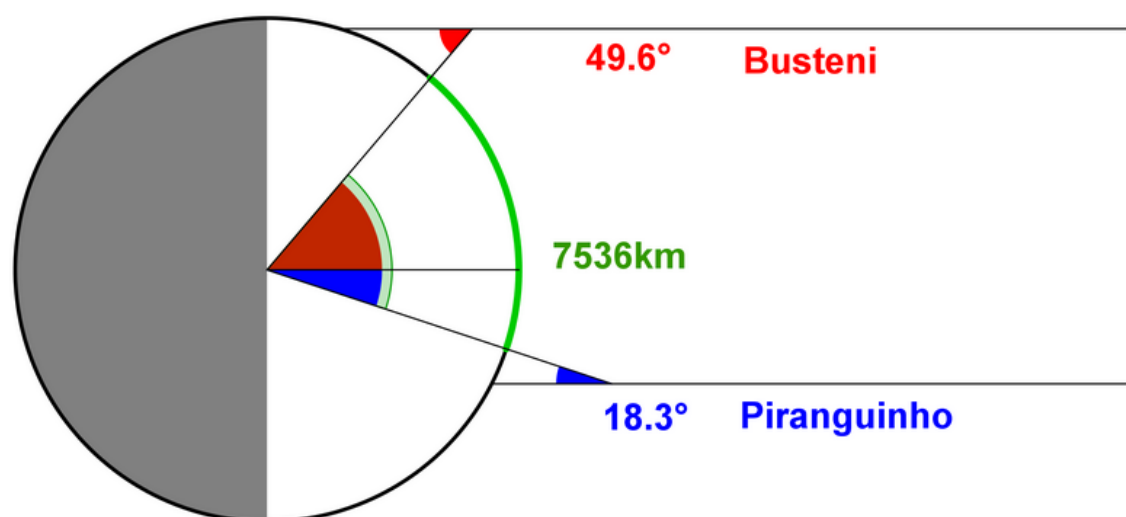


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535

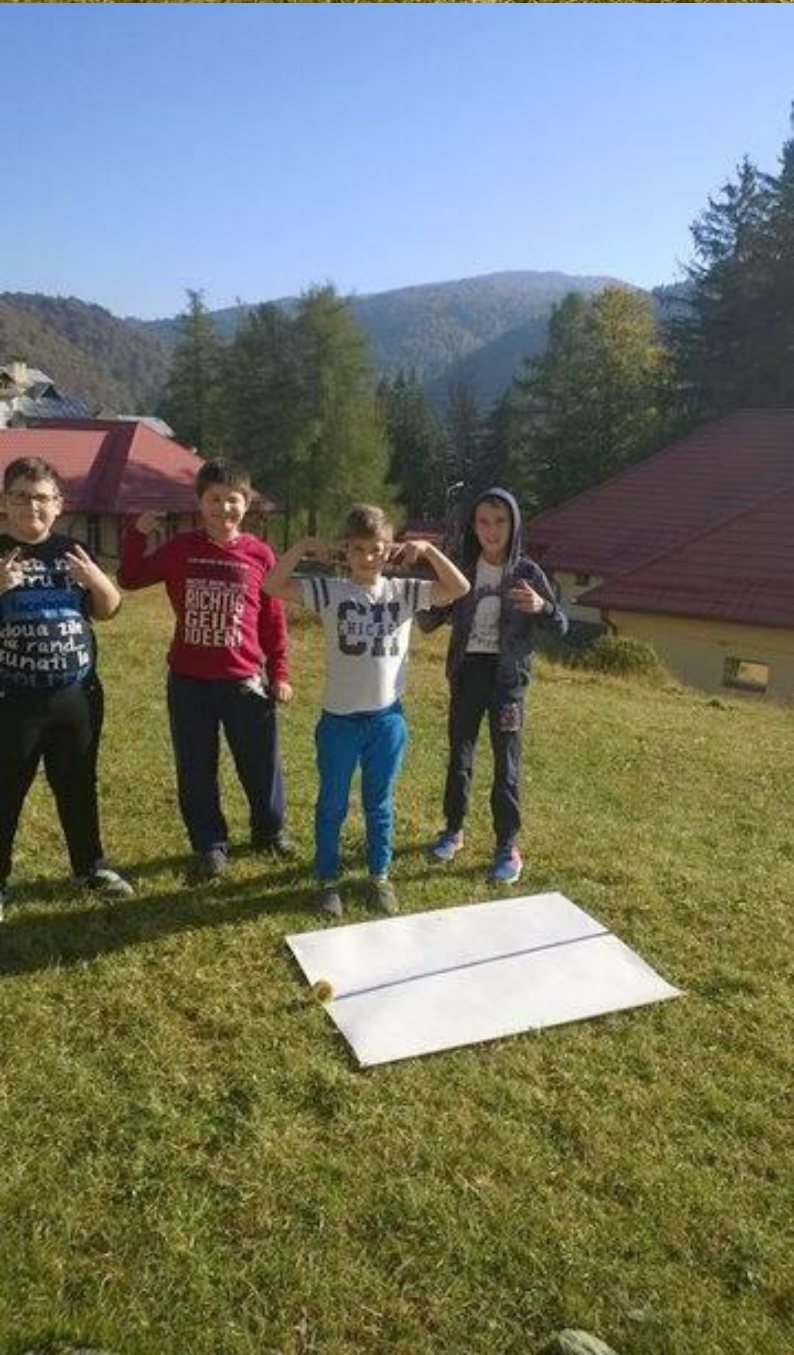
Date	Gnomon	Shadow	Angle
02 October 2018	25.9 cm	30 cm	49.2 °
03 October 2018	59.6 cm	70 cm	49.6 °
04 October 2018	60.4 cm	72.0 cm	50.0 °
05 October 2018	22.3 cm	27 cm	50.4 °
06 October 2018	24.5 cm	30 cm	50.8 °
08 October 2018	59.5 cm	75.0 cm	51.6 °
09 October 2018	59.5 cm	76.0 cm	51.9 °
10 October 2018	59.5 cm	77.0 cm	52.3 °
11 October 2018	59.5 cm	78.1 cm	52.7 °
12 October 2018	74.0 cm	98.6 cm	53.1 °
15 October 2018	59.5 cm	82.6 cm	54.2 °
16 October 2018	59.5 cm	83.7 cm	54.6 °
17 October 2018	57.6 cm	82.2 cm	55 °
18 October 2018	57.6 cm	83.3 cm	55.3 °
19 October 2018	59.5 cm	87.2 cm	55.7 °
22 October 2018	65.5 cm	100.0 cm	56.8 °
23 October 2018	65.9 cm	102 cm	57.1 °
25 October 2018	100 cm	158.9 cm	57.8 °
26 October 2018	66.8 cm	108 cm	58.3 °
30 October 2018	100 cm	169.7 cm	59.5 °
31 October 2018	20.3 cm	35 cm	59.9 °

03/10/2018 (Busteni-Romania) Latitude: 45.416°

03/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7536\text{km}}{49.6^\circ + 18.3^\circ} = 39955 \text{ km}$$



Donji Muć, Croatia

October 2018

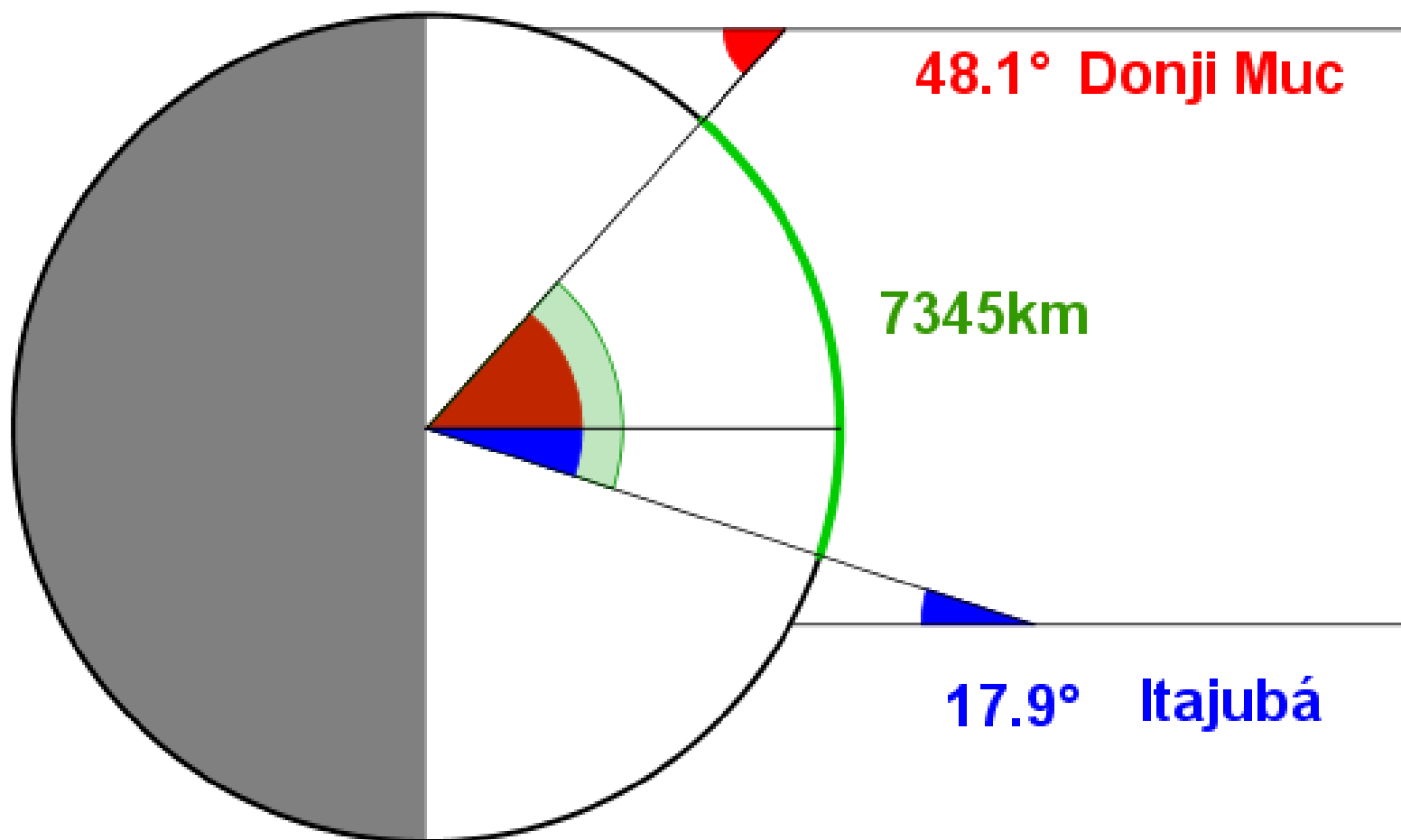


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Donji Muć	Croatia	oš kneza Branimira	43.694	16.462

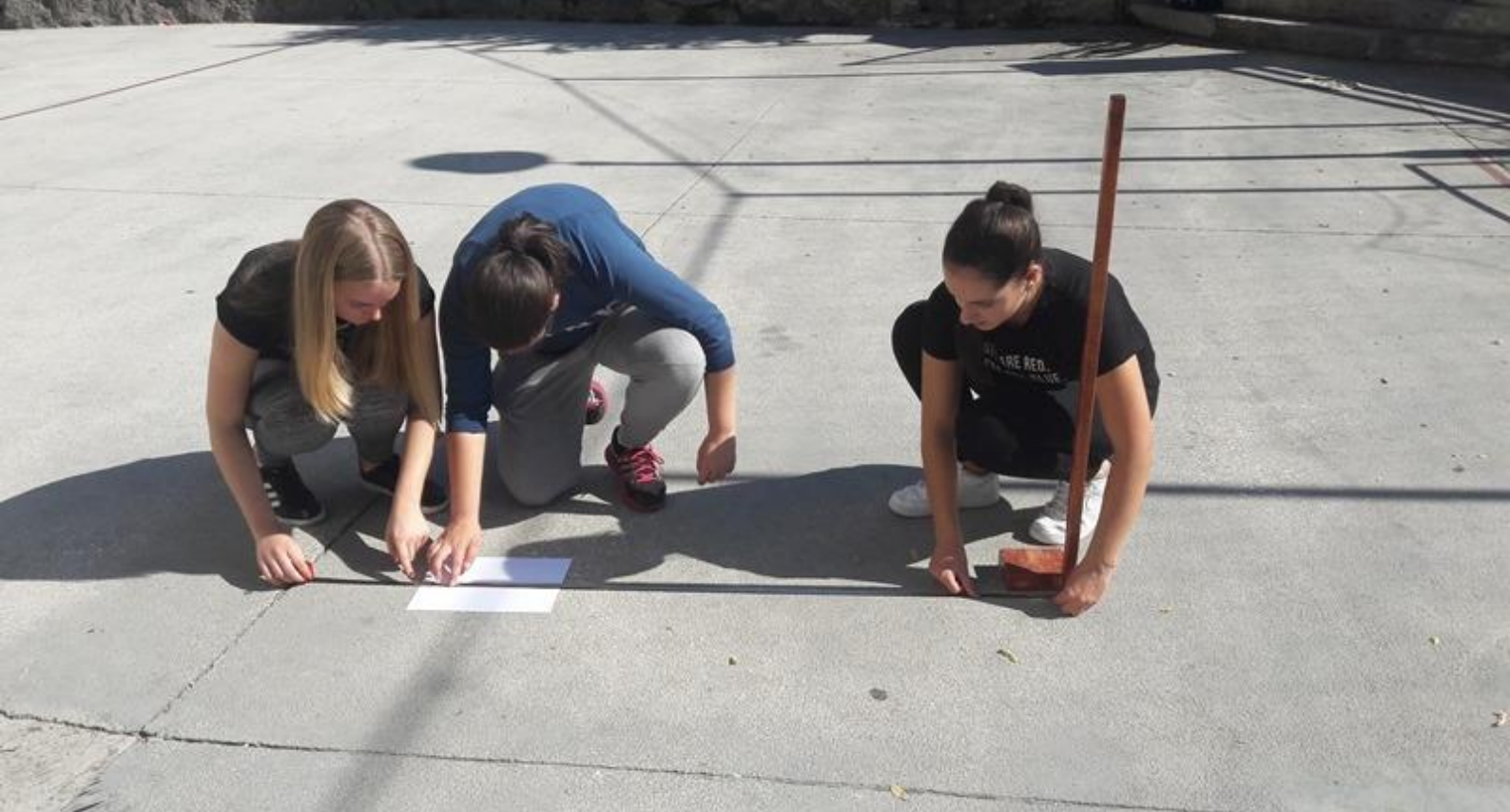
Date	Gnomon	Shadow	Angle
04 October 2018	100.0 cm	111.3 cm	48.1 °
11 October 2018	100.0 cm	125.0 cm	51.3 °
12 October 2018	100.0 cm	122.5 cm	50.8 °
25 October 2018	100 cm	145.7 cm	55.5 °

04/10/2018 (Donji Muc-Croatia) Latitude: 43.694°

04/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 7345\text{km}}{48.1^\circ + 17.9^\circ} = 40064 \text{ km}$$



Dorohoi, Romania

October 2018



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Dorohoi	Romania	Grigore Ghica National College	47.953	26.394

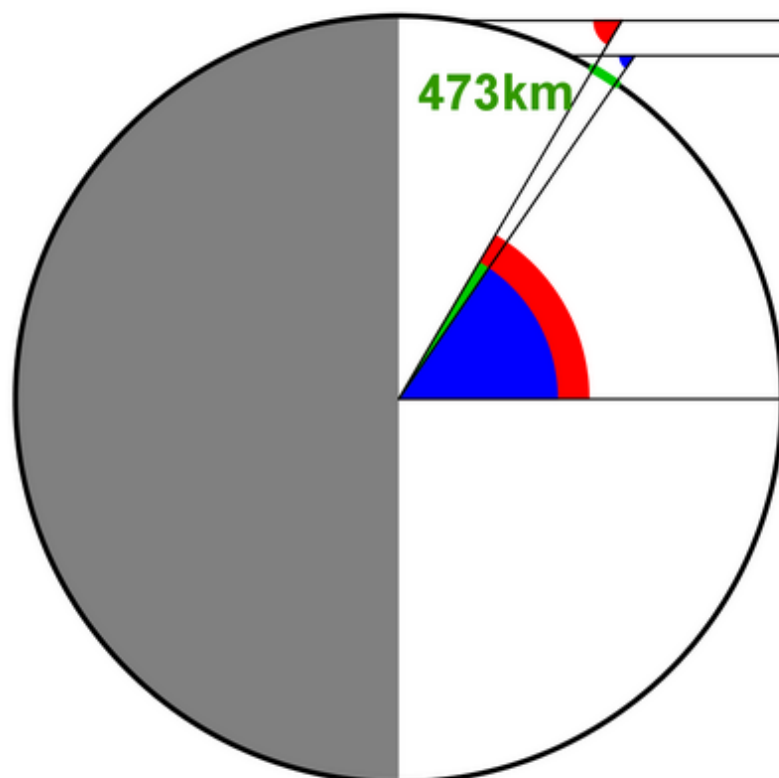
Date	Gnomon	Shadow	Angle
17 October 2018	100.0 cm	162.5 cm	58.4 °
18 October 2018	100.0 cm	160 cm	58.0 °
25 October 2018	100.0 cm	170.0 cm	59.5 °
30 October 2018	100.0 cm	169.7 cm	59.5 °

25/10/2018 (Dorohoi-Romania) Latitude: 47.953°

25/10/2018 (Donji Muc-Croatia) Latitude: 43.694°

59.5° Dorohoi

55.5° Donji Muc



$$\text{circumference} = \frac{360^\circ \times 473\text{km}}{59.5^\circ - 55.5^\circ} = 42570 \text{ km}$$



Itajubá, Brazil

October 2018

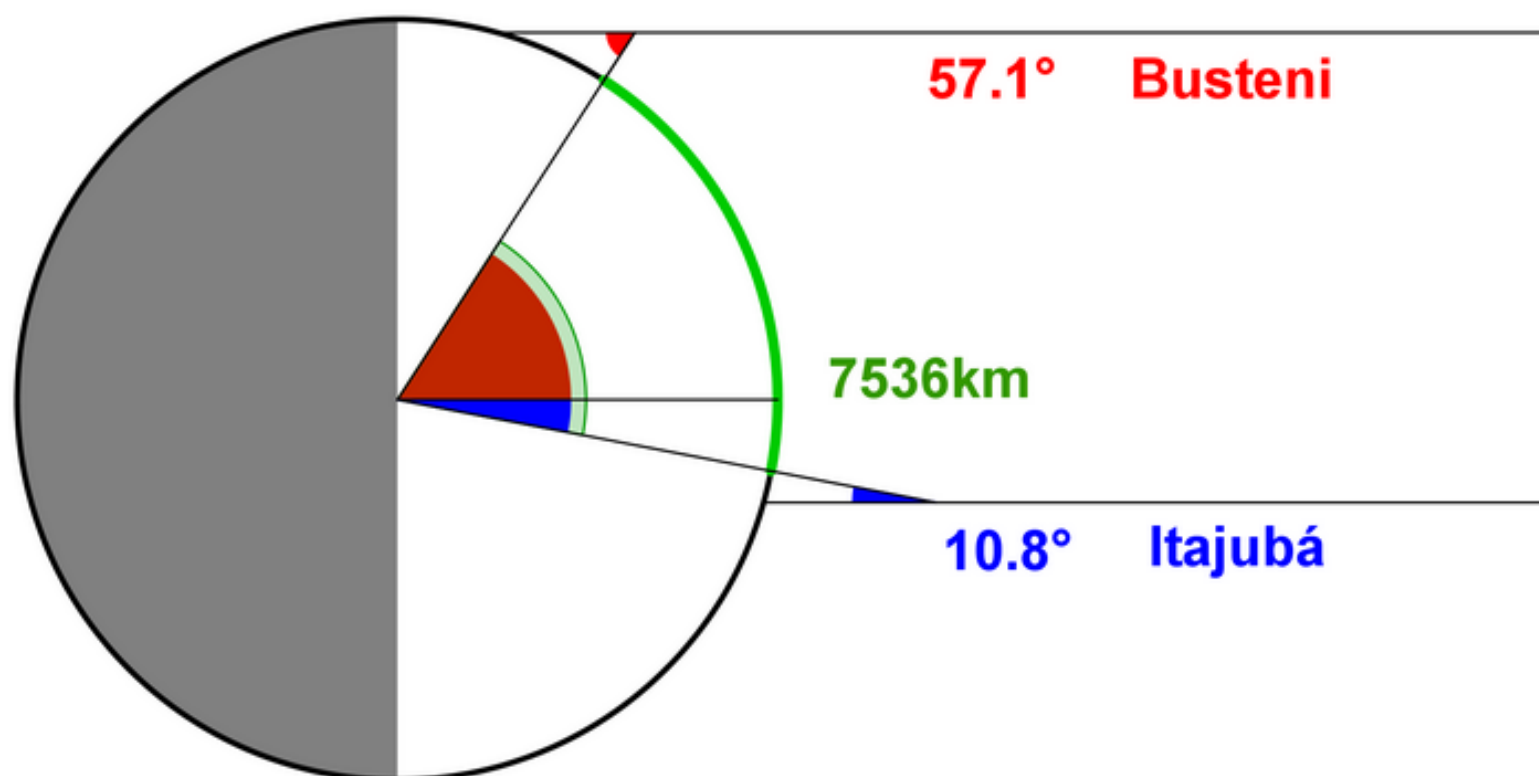


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Itajubá	Brazil	Universidade Federal de Itajubá	-22.415	-45.449

Date	Gnomon	Shadow	Angle
02 October 2018	47.3 cm	-16.1 cm	-18.8 °
04 October 2018	47.3 cm	-15.3 cm	-17.9 °
05 October 2018	47.3 cm	-14.9 cm	-17.5 °
23 October 2018	47.3 cm	-9 cm	-10.8 °

23/10/2018 (Busteni-Romania) Latitude: 45.416°

23/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 7536\text{km}}{57.1^\circ + 10.8^\circ} = 39955 \text{ km}$$



02.10.2018

Kuantan, Malaysia

October 2018

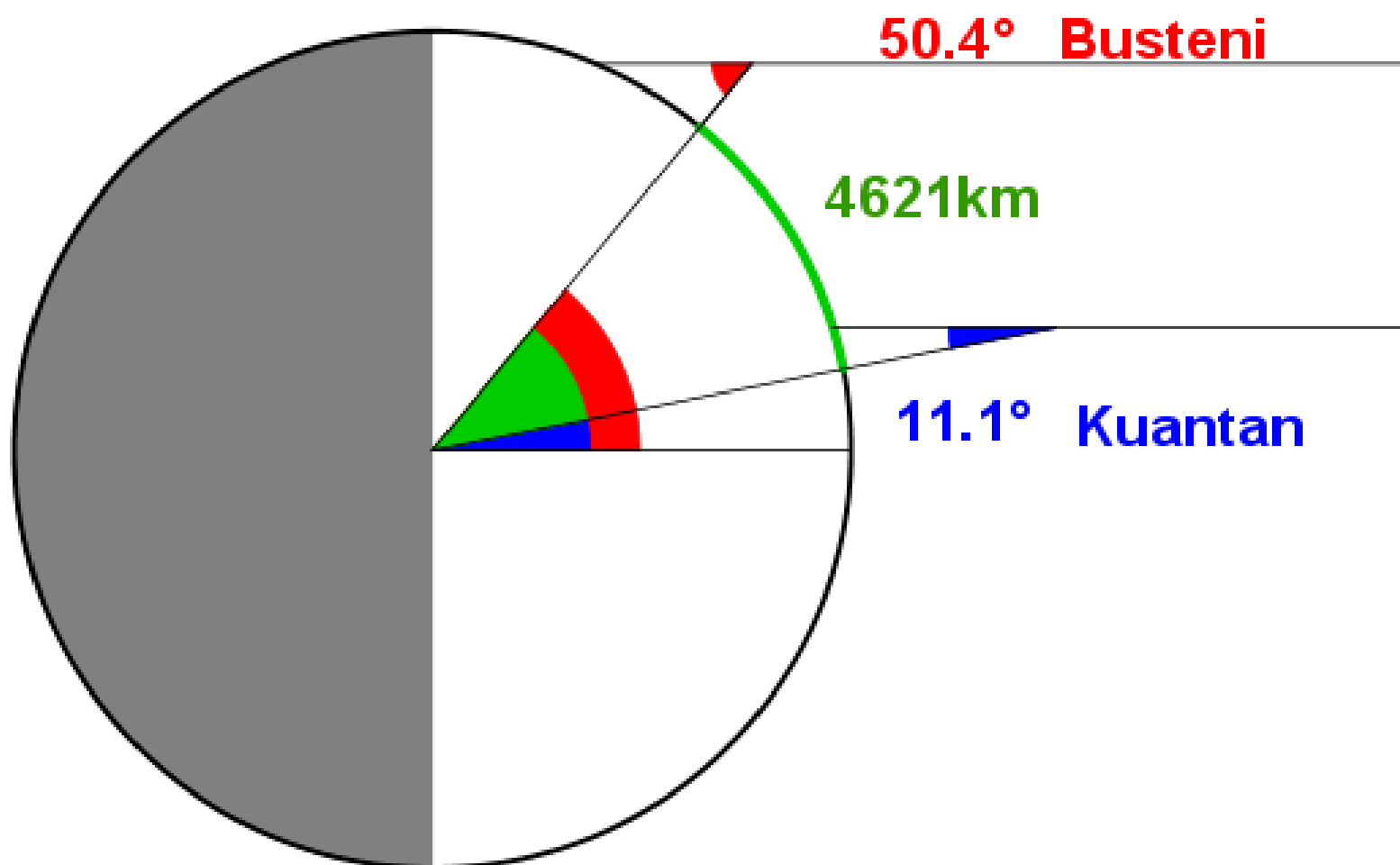


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Kuantan	Malaysia	SMK Semambu	3.870	103.325

Date	Gnomon	Shadow	Angle
05 October 2018	106.5 cm	13.2 cm	7.1 °
05 October 2018	32.5 cm	6.4 cm	11.1 °
06 October 2018	32.0 cm	6.4 cm	11.3 °

05/10/2018 (Busteni-Romania) Latitude: 45.416°

05/10/2018 (Kuantan-Malaysia) Latitude: 3.827°



$$\text{circumference} = \frac{360^\circ \times 4621\text{km}}{50.4^\circ - 11.1^\circ} = 42330 \text{ km}$$



Lafrançaise, France

October 2018

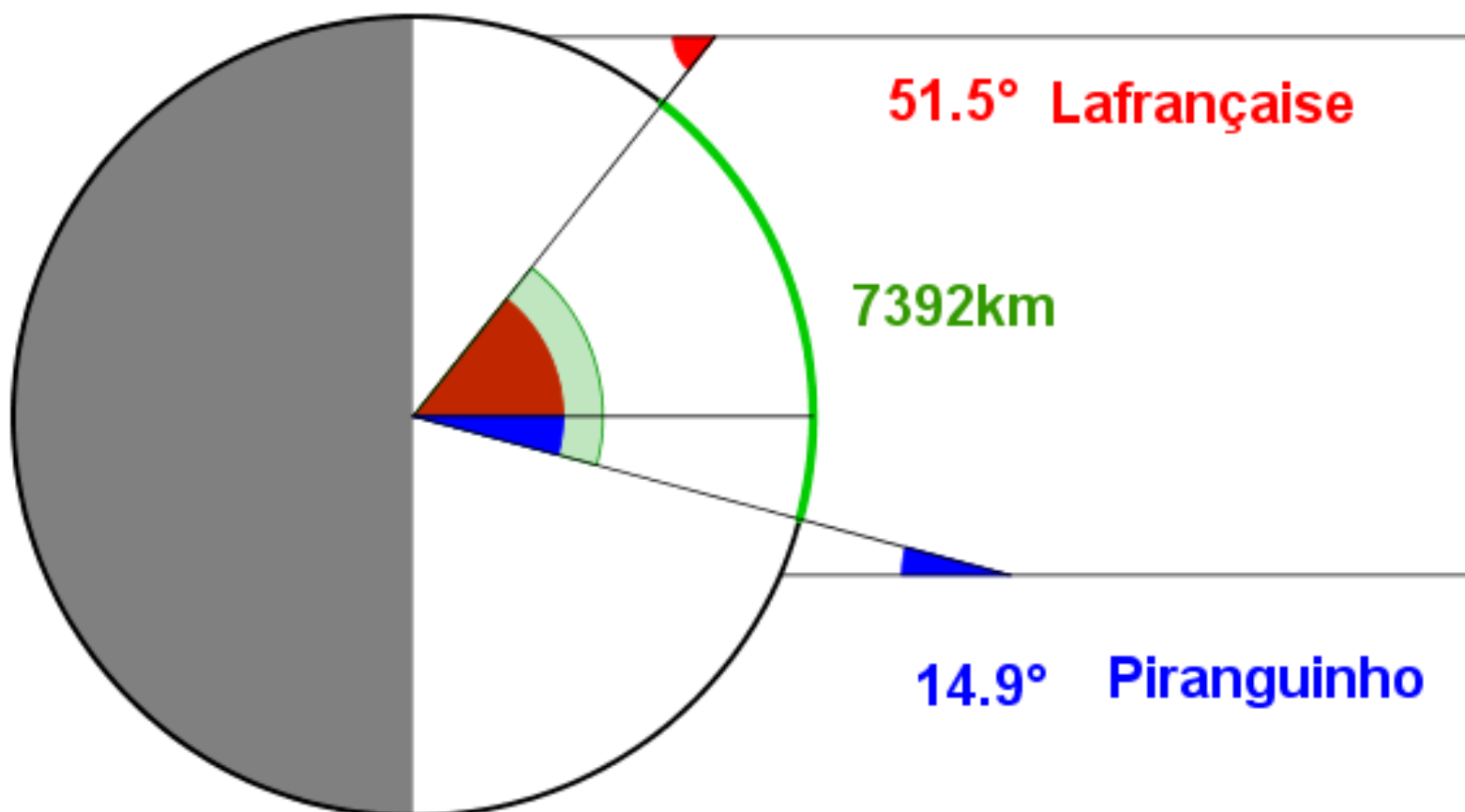


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237

Date	Gnomon	Shadow	Angle
01 October 2018	100 cm	108.7 cm	47.4 °
04 October 2018	100.0 cm	112.5 cm	48.4 °
05 October 2018	100 cm	114 cm	48.7 °
11 October 2018	100.0 cm	124.0 cm	51.1 °
12 October 2018	100.0 cm	125.5 cm	51.5 °
18 October 2018	100 cm	136.7 cm	53.8 °

12/10/2018 (Lafrançaise-France) Latitude: 44.127°

12/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7392\text{km}}{51.5^\circ + 14.9^\circ} = 40077 \text{ km}$$



Lucknow, India

October 2018

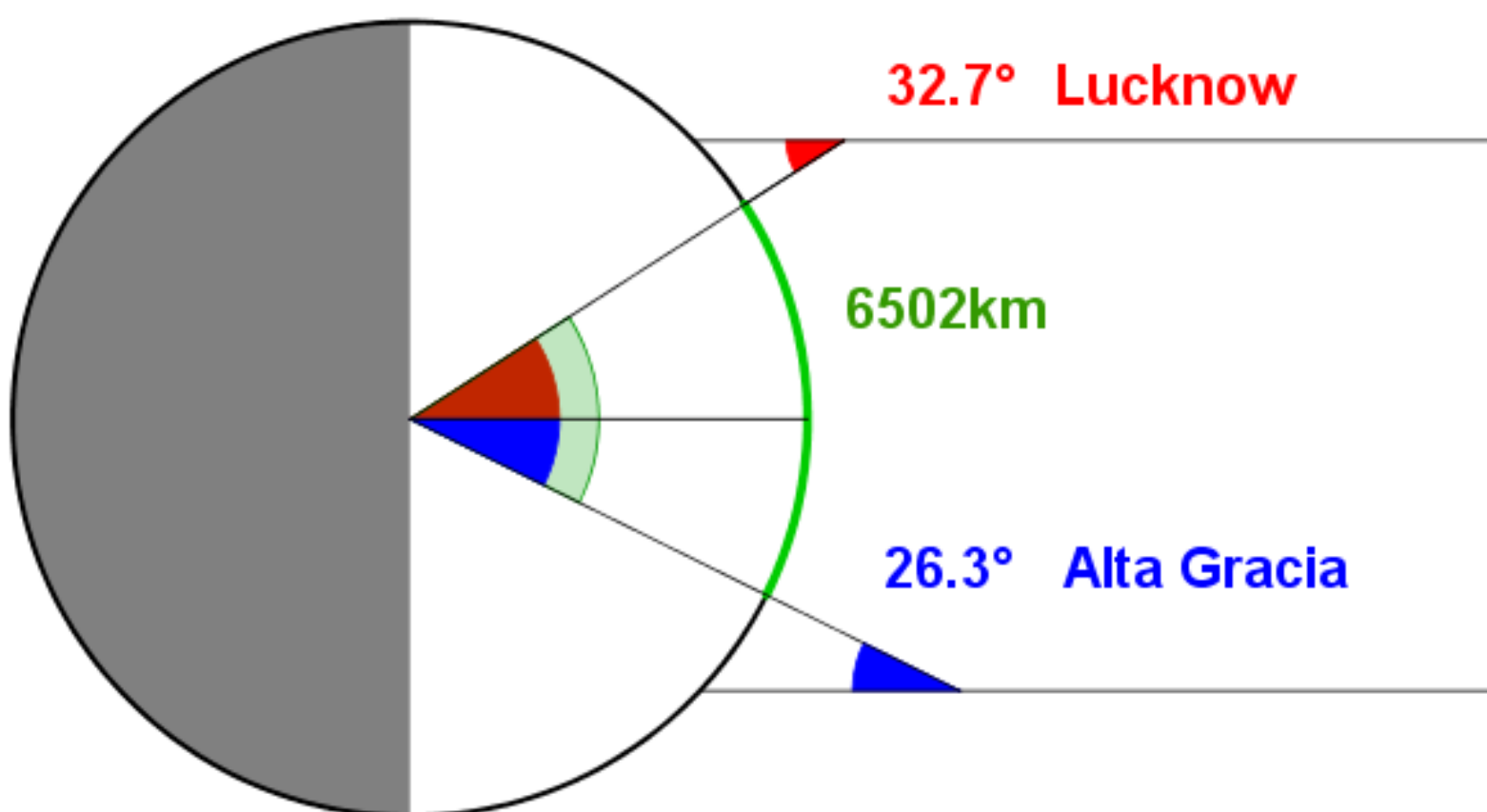


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lucknow	India	Indira Gandhi Pratishthan	26.869	81.008

Date	Gnomon	Shadow	Angle
06 October 2018	28 cm	18 cm	32.7 °

06/10/2018 (Lucknow-India) Latitude: 26.869°

06/10/2018 (Alta Gracia-Argentina) Latitude: -31.658°



$$\text{circumference} = \frac{360^\circ \times 6502\text{km}}{32.7^\circ + 26.3^\circ} = 39673 \text{ km}$$



Mărgineni, Romania

October 2018

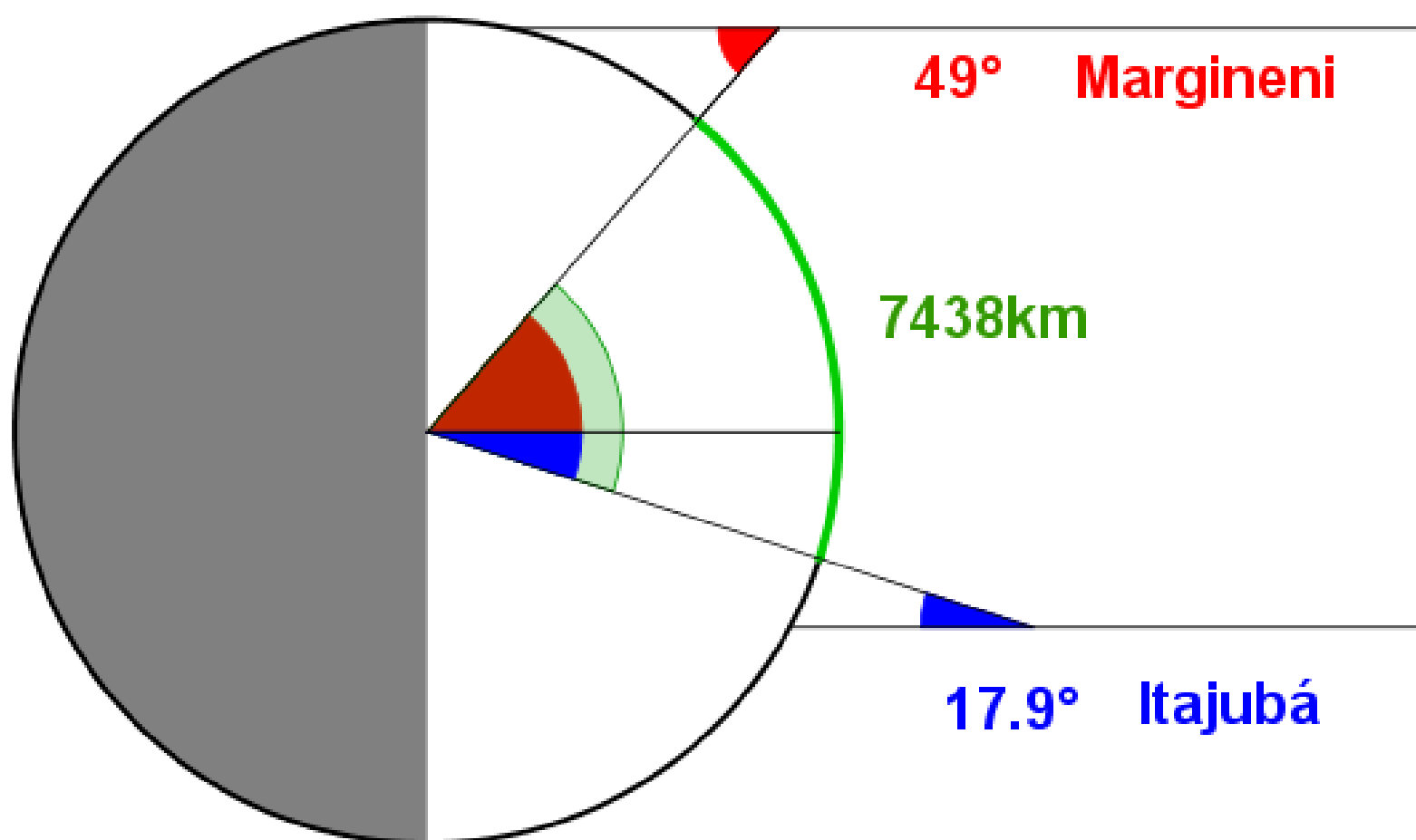


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554

Date	Gnomon	Shadow	Angle
04/10.2018	100.0 cm	115.0 cm	49.0 °
25 October 2018	100 cm	138 cm	54.1 °

04/10.2018 (Margineni-Romania) Latitude: 44.533°

04/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 7438\text{km}}{49^\circ + 17.9^\circ} = 40025 \text{ km}$$



Secondary School Gh. Popescu, ROMANIA
04.10.2018



25.10.2018

Secondary School Gh. Popescu, Romania

Petroupoli, Greece

October 2018

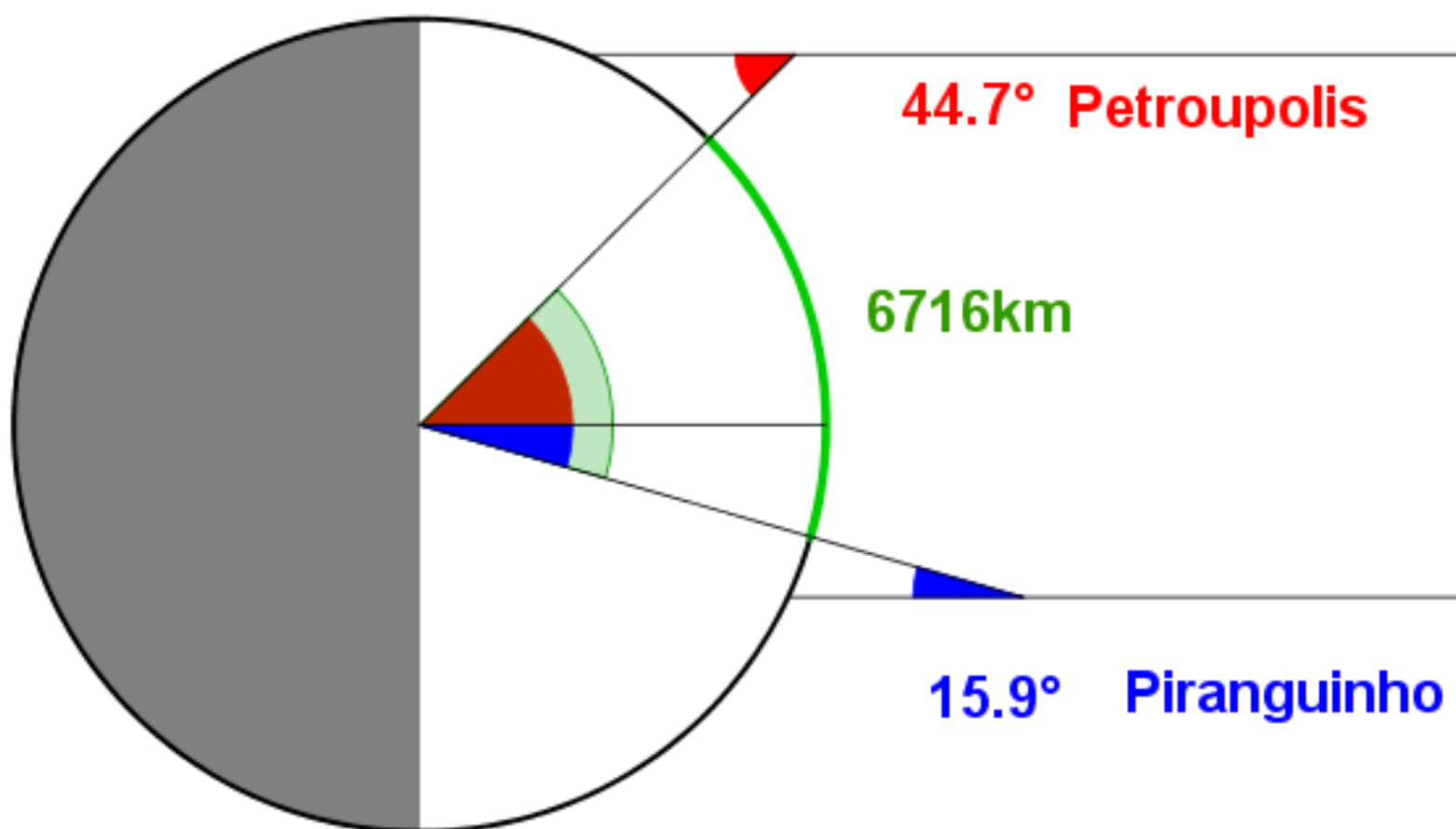


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Petroupoli	Greece	4o Junior High School	38.036	23.674

Date	Gnomon	Shadow	Angle
10 October 2018	52.3 cm	51.8 cm	44.7 °

10/10/2018 (Petroupolis-Greece) Latitude: 38.036°

10/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 6716\text{km}}{44.7^\circ + 15.9^\circ} = 39897 \text{ km}$$



Piraeus, Greece

October 2018

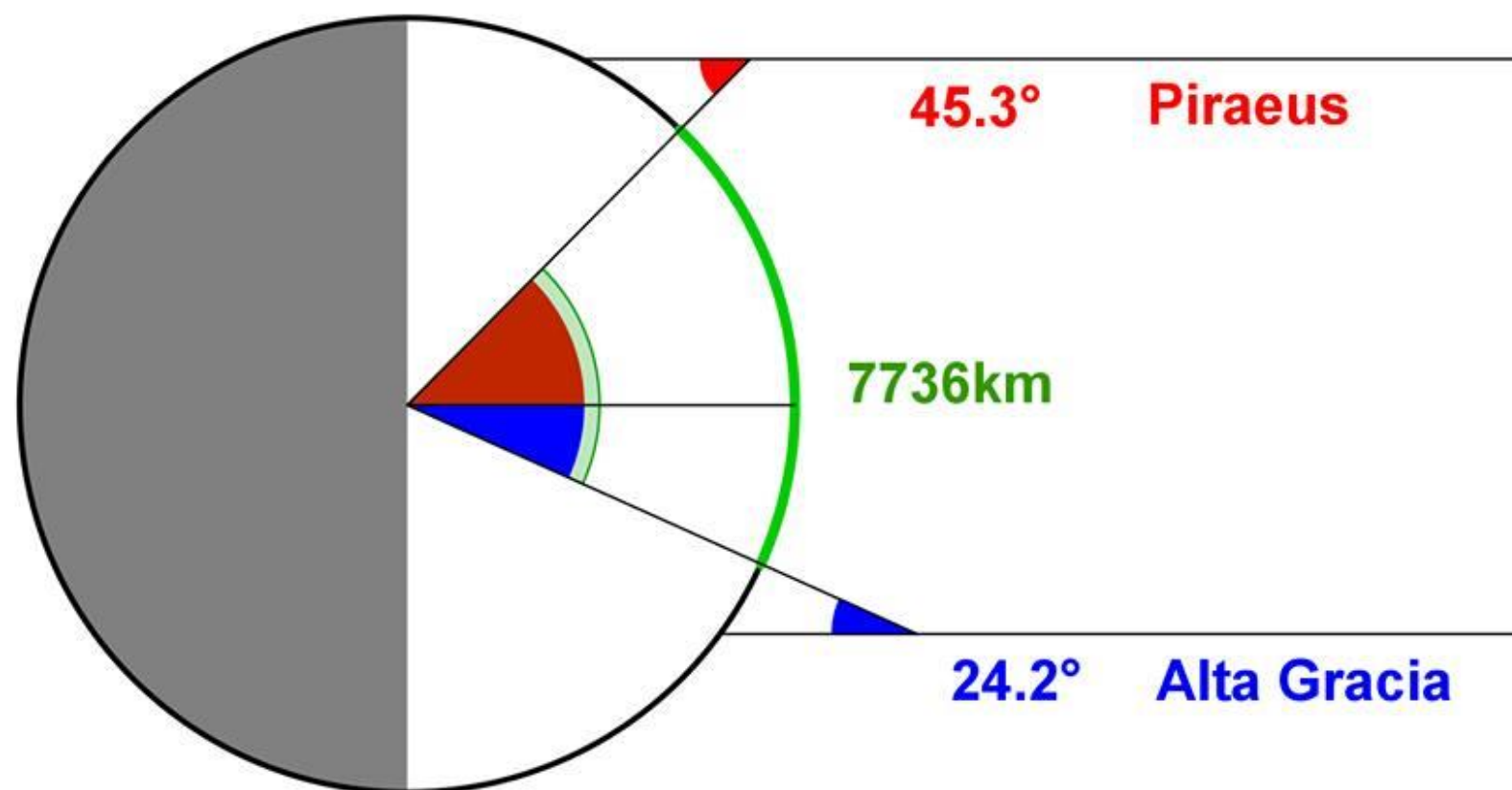


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655

Date	Gnomon	Shadow	Angle
04 October 2018	100.0 cm	93.0 cm	42.9 °
09 October 2018	50.0 cm	45.0 cm	42.0 °
10 October 2018	100.0 cm	101.0 cm	45.3 °
31 October 2018	100.0 cm	128.0 cm	52.0 °

10/10/2018 (Piraeus-Greece) Latitude: 37.977°

10/10/2018 (Alta Gracia-Argentina) Latitude: -31.658°



$$\text{circumference} = \frac{360^\circ \times 7736\text{km}}{45.3^\circ + 24.2^\circ} = 40071 \text{ km}$$



Piranguinho, Brazil

October 2018

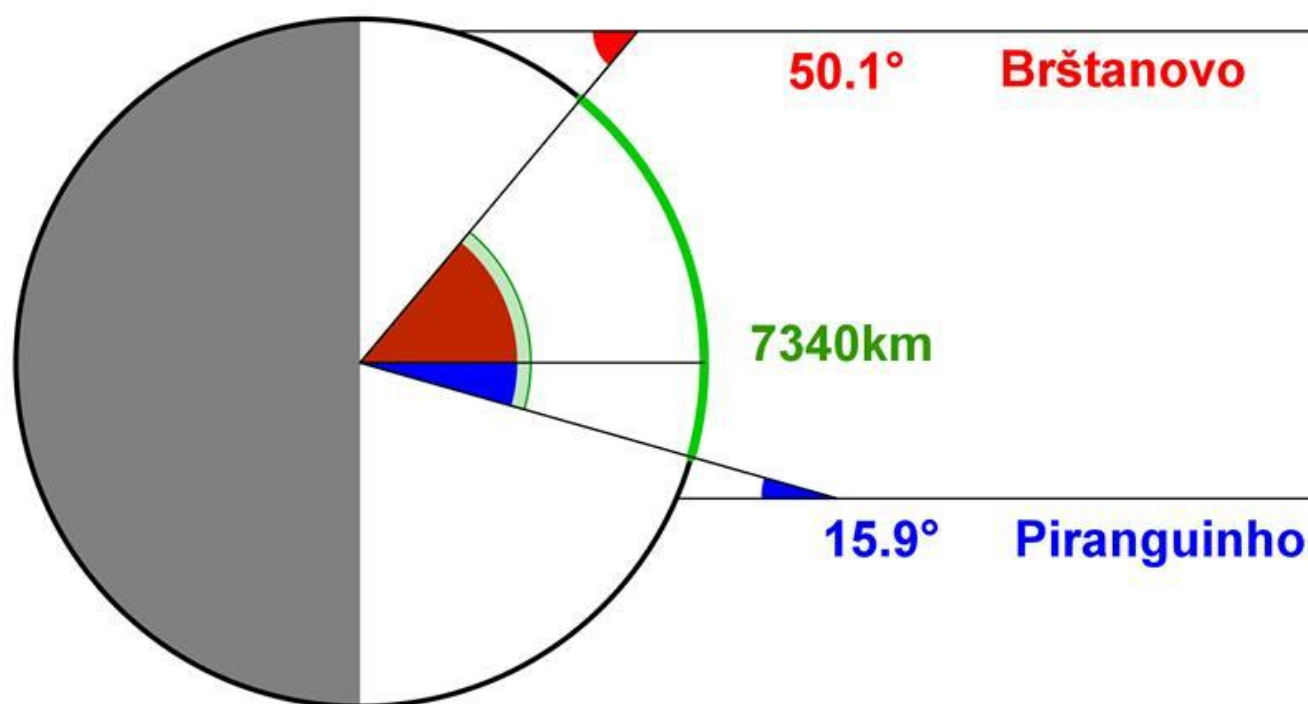


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piranguinho	Brazil	Universidade Federal de Itajubá	-22.411	-45.535

Date	Gnomon	Shadow	Angle
03 October 2018	70.0 cm	-23.2 cm	-18.3 °
10 October 2018	70.0 cm	-20.0 cm	-15.9 °
12 October 2018	70.0 cm	-18.6 cm	-14.9 °
22 October 2018	70 cm	-13.7 cm	-11.1 °

10/10/2018 (Brštano-Croatia) Latitude: 43.658°

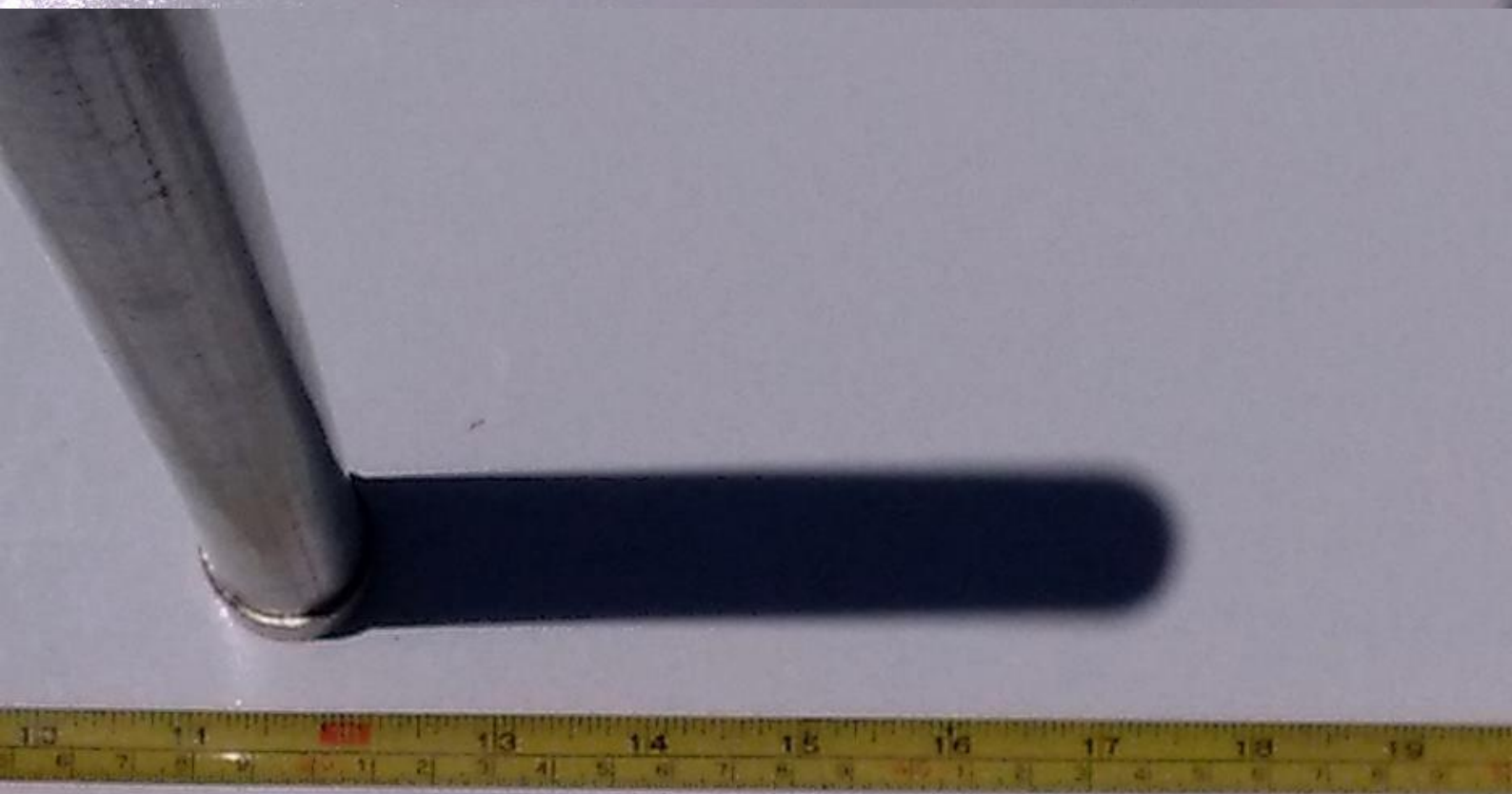
10/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 7340\text{km}}{50.1^\circ + 15.9^\circ} = 40036 \text{ km}$$



12.10.2018



22.10.2018

Pogana, Romania

October 2018

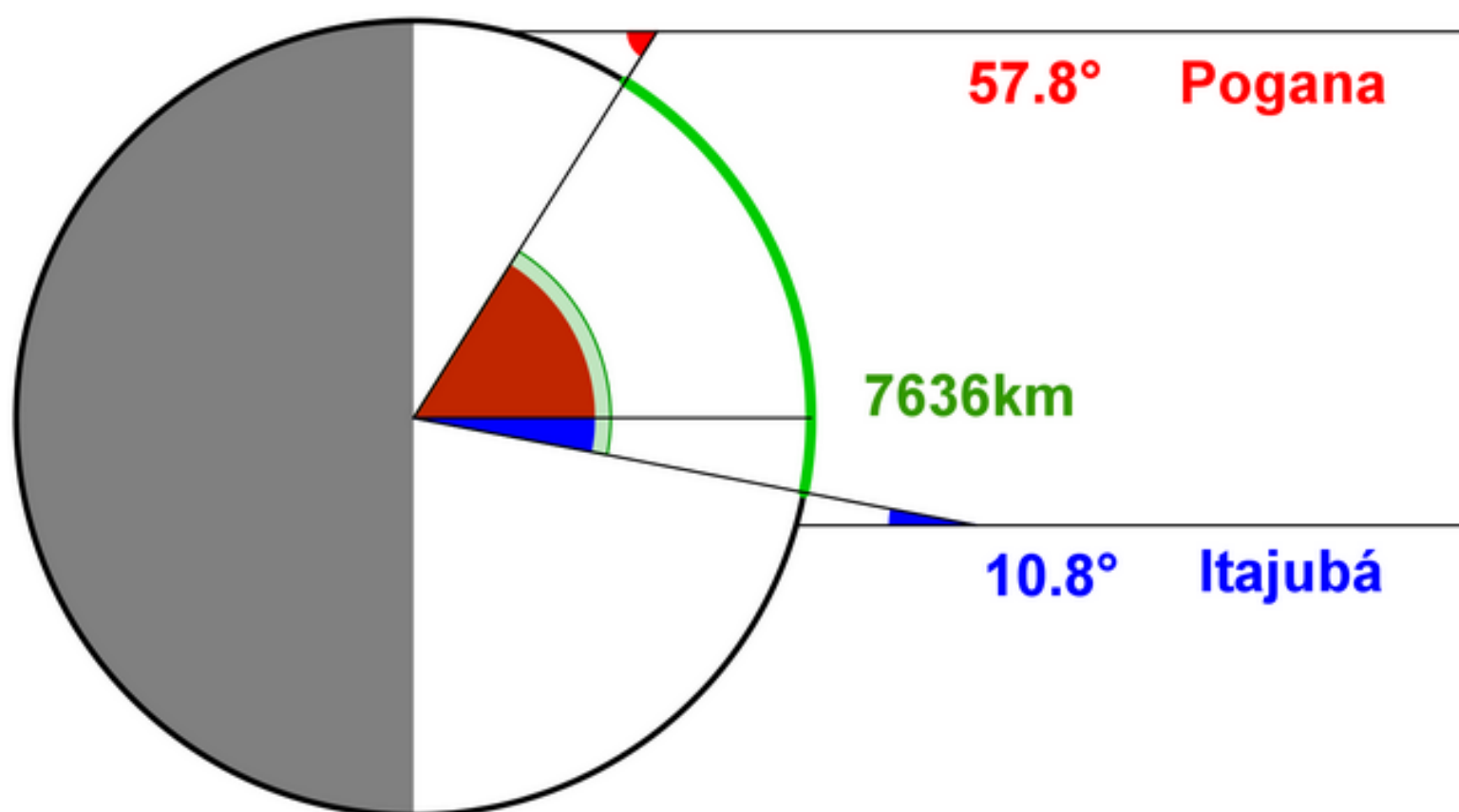


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Pogana	Romania	Scoala Gimnaziala Nr.1 Pogana	46.313	27.575

Date	Gnomon	Shadow	Angle
05 October 2018	80.0 cm	98.5 cm	50.9 °
08 October 2018	80.0 cm	102.5 cm	52.0 °
12 October 2018	80.0 cm	108.0 cm	53.5 °
15 October 2018	60 cm	85.3 cm	54.9 °
23 October 2018	33.4 cm	53 cm	57.8 °
26 October 2018	33.4 cm	55.9 cm	59.1 °

23/10/2018 (Pogana-Romania) Latitude: 46.313°

23/10/2018 (Itajubá-Brazil) Latitude: -22.415°



$$\text{circumference} = \frac{360^\circ \times 7636\text{km}}{57.8^\circ + 10.8^\circ} = 40072 \text{ km}$$



Pylos, Greece

October 2018

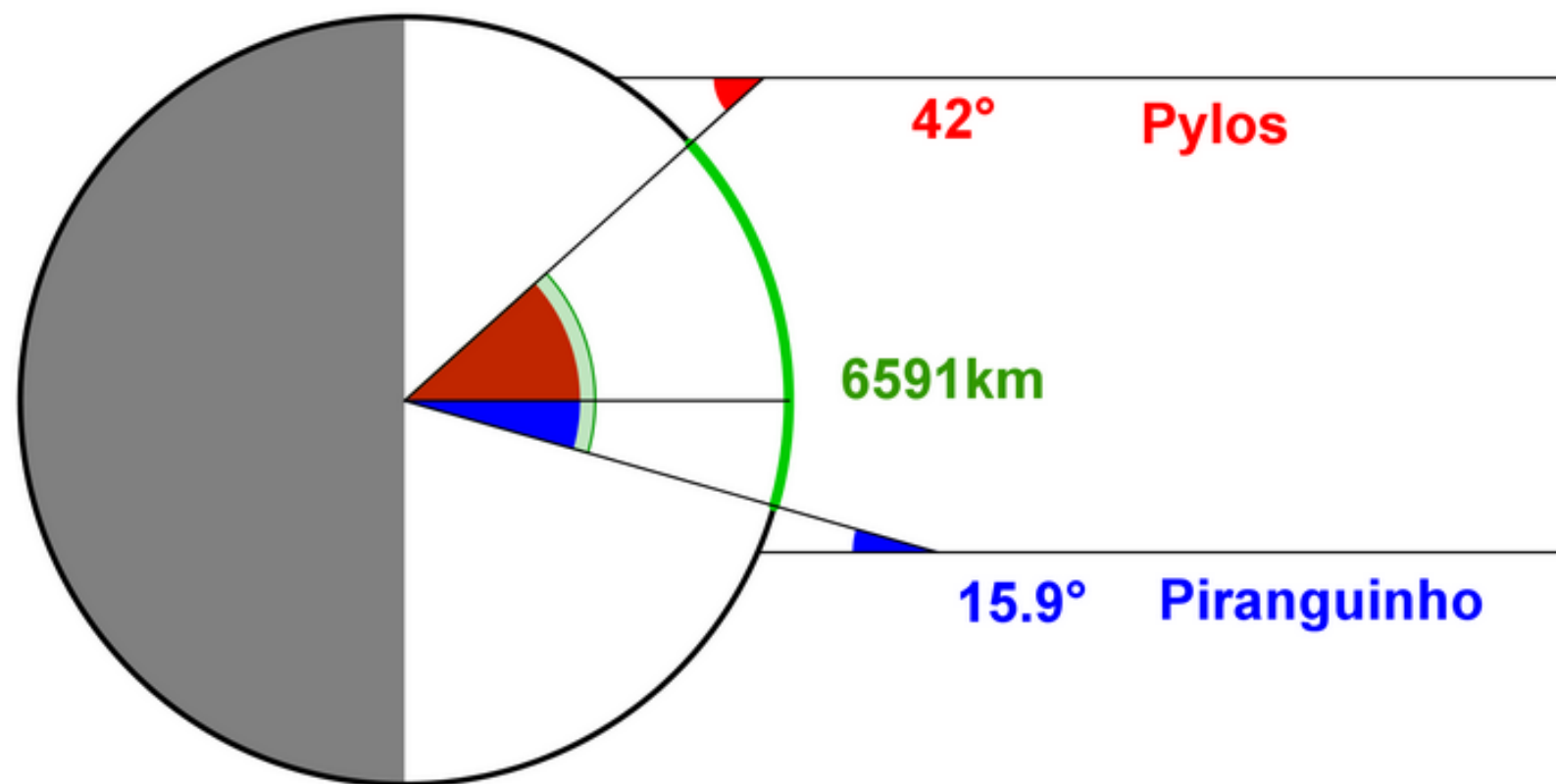


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Pylos	Greece	1st Kindergarten of Pylos	36.911	21.694

Date	Gnomon	Shadow	Angle
10 October 2018	17.2 cm	15.5 cm	42.0 °

10/10/2018 (Pylos-Greece) Latitude: 36.911°

10/10/2018 (Piranguinho-Brazil) Latitude: -22.411°



$$\text{circumference} = \frac{360^\circ \times 6591\text{km}}{42^\circ + 15.9^\circ} = 40980 \text{ km}$$



10/10/2018



10/10/2018

Rio de Janeiro, Brazil

October 2018

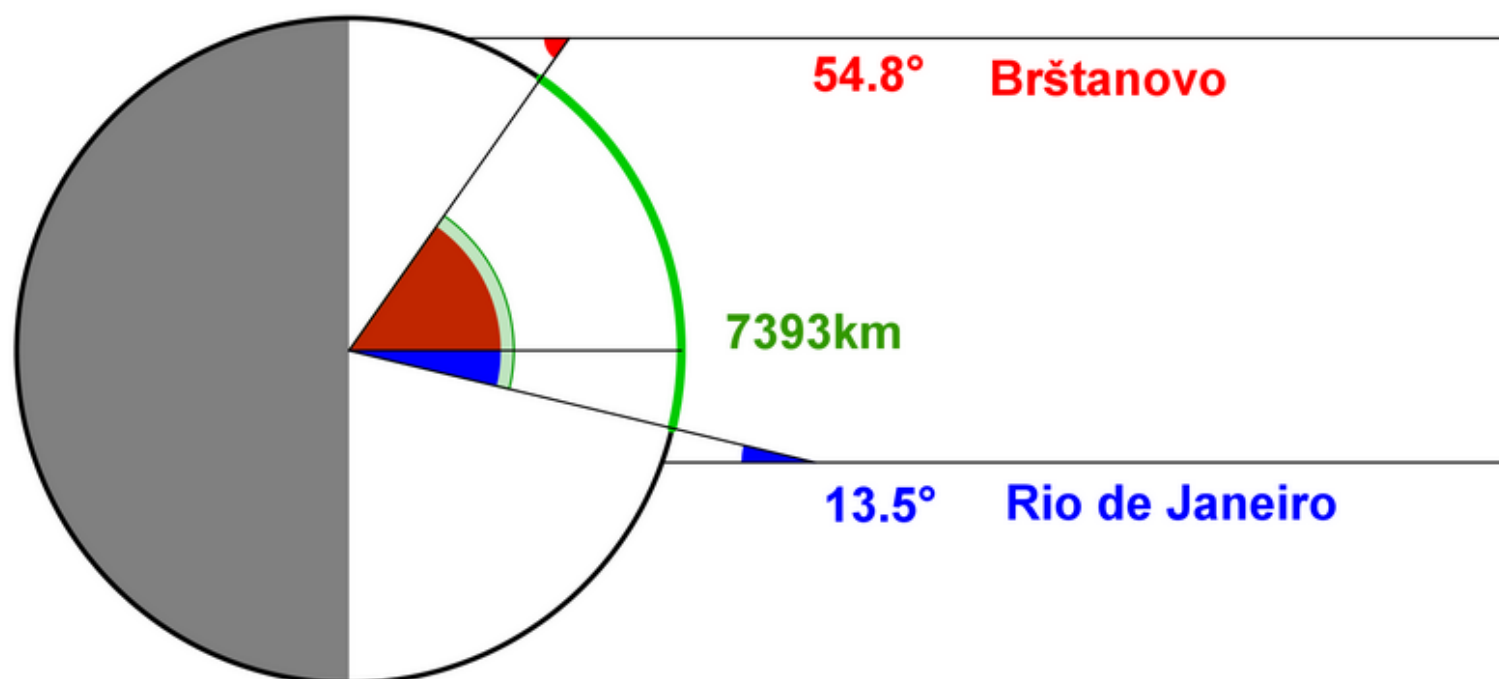


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
02 October 2018	100 cm	-39 cm	-21.3 °
03 October 2018	100.0 cm	-39.0 cm	-21.3 °
17 October 2018	100 cm	-38 cm	-20.8 °
23 October 2018	100 cm	-24 cm	-13.5 °
31 October 2018	100 cm	-20 cm	-11.3 °

23/10/2018 (Brštanovo-Croatia) Latitude: 43.658°

23/10/2018 (Rio de Janeiro-Brazil) Latitude: -22.89°



$$\text{circumference} = \frac{360^\circ \times 7393\text{km}}{54.8^\circ + 13.5^\circ} = 38967 \text{ km}$$



Rionegro, Colombia

October 2018

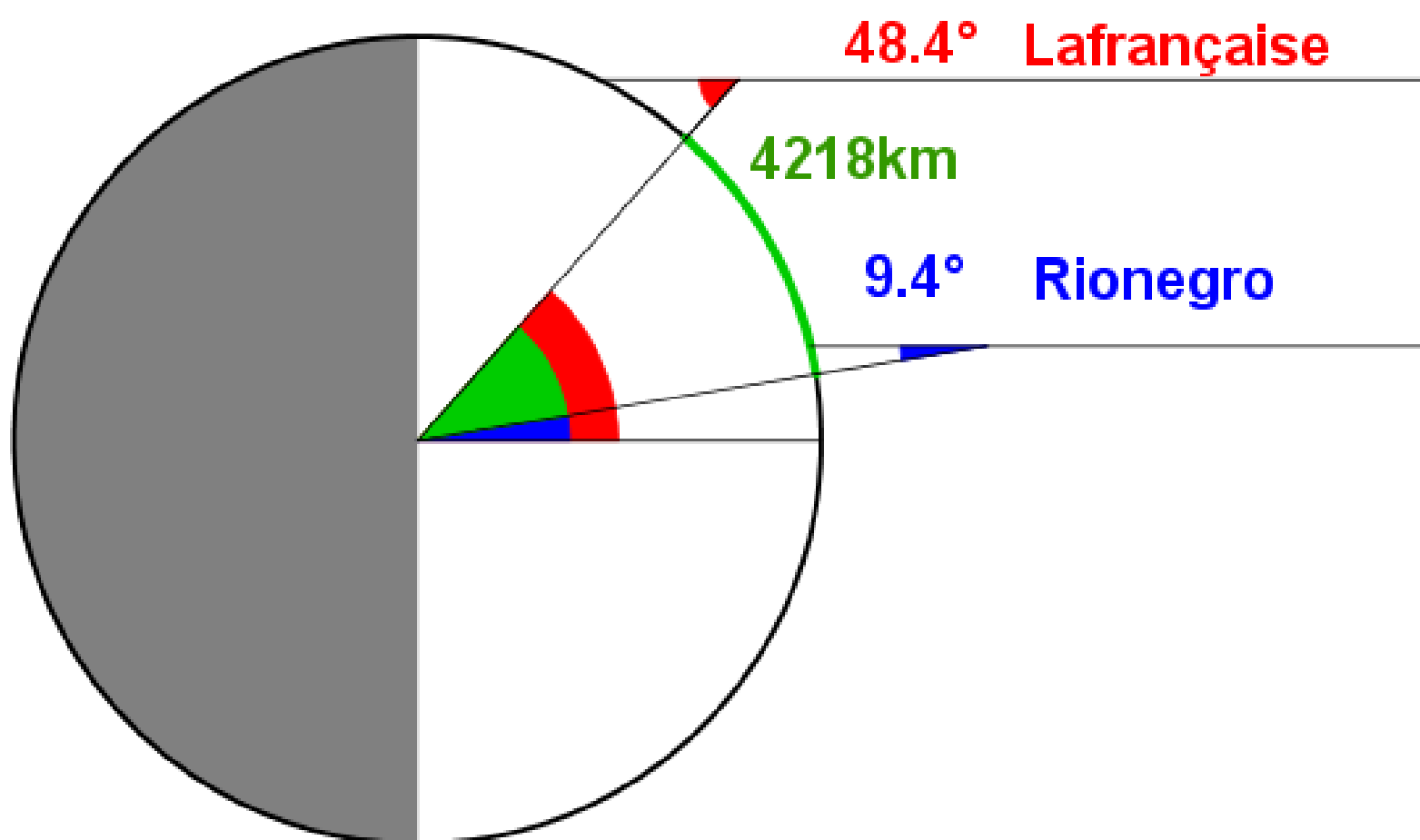


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rionegro	Colombia	Colegio Campestre San Nicolás	6.163	-75.359

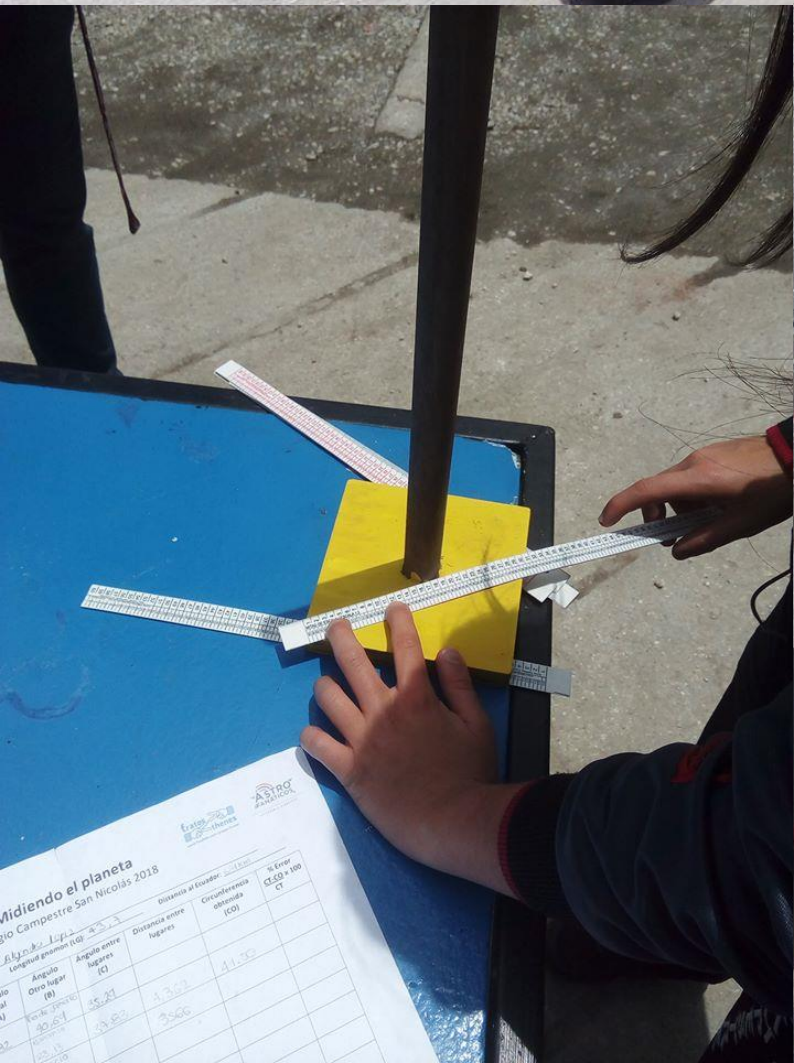
Date	Gnomon	Shadow	Angle
04 October 2018	23.0 cm	3.8 cm	9.4 °

04/10/2018 (Lafrançaise-France) Latitude: 44.127°

04/10/2018 (Rionegro-Colombia) Latitude: 6.163°



$$\text{circumference} = \frac{360^\circ \times 4218\text{km}}{48.4^\circ - 9.4^\circ} = 38935 \text{ km}$$



Mediendo el planeta
 Olimpiada Campestre San Nicolás 2018

Datos del participante		Distancia al Ecuador		Circunferencia		Circunferencia	
		Distancia entre lugares		Distancia entre lugares		Distancia entre lugares	
Nombre							
Apellido							
Grado							
Grupo							
Fecha							
Horario							
Observador							
Medidor							
Asesor							
Observaciones							

Yamunanagar, India

October 2018

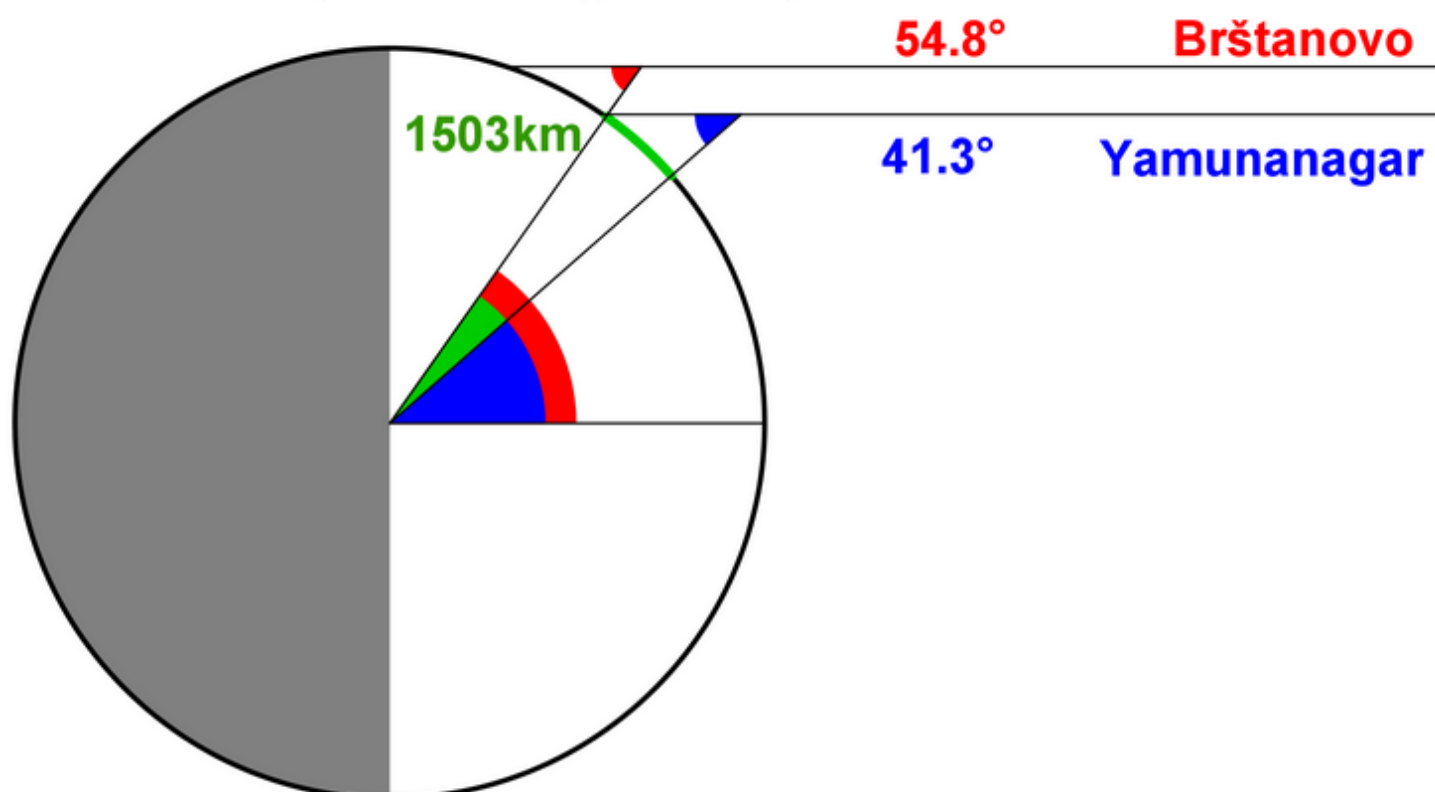


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Yamunanagar	India	DIE&T Tejli	30.134	77.310

Date	Gnomon	Shadow	Angle
23 October 2018	28 cm	24.6 cm	41.3 °
26 October 2018	28 cm	25 cm	41.8 °

23/10/2018 (Brštanovo-Croatia) Latitude: 43.658°

23/10/2018 (Yamunanagar-India) Latitude: 30.134°



$$\text{circumference} = \frac{360^\circ \times 1503\text{km}}{54.8^\circ - 41.3^\circ} = 40080 \text{ km}$$



Yarumal, Colombia

October 2018

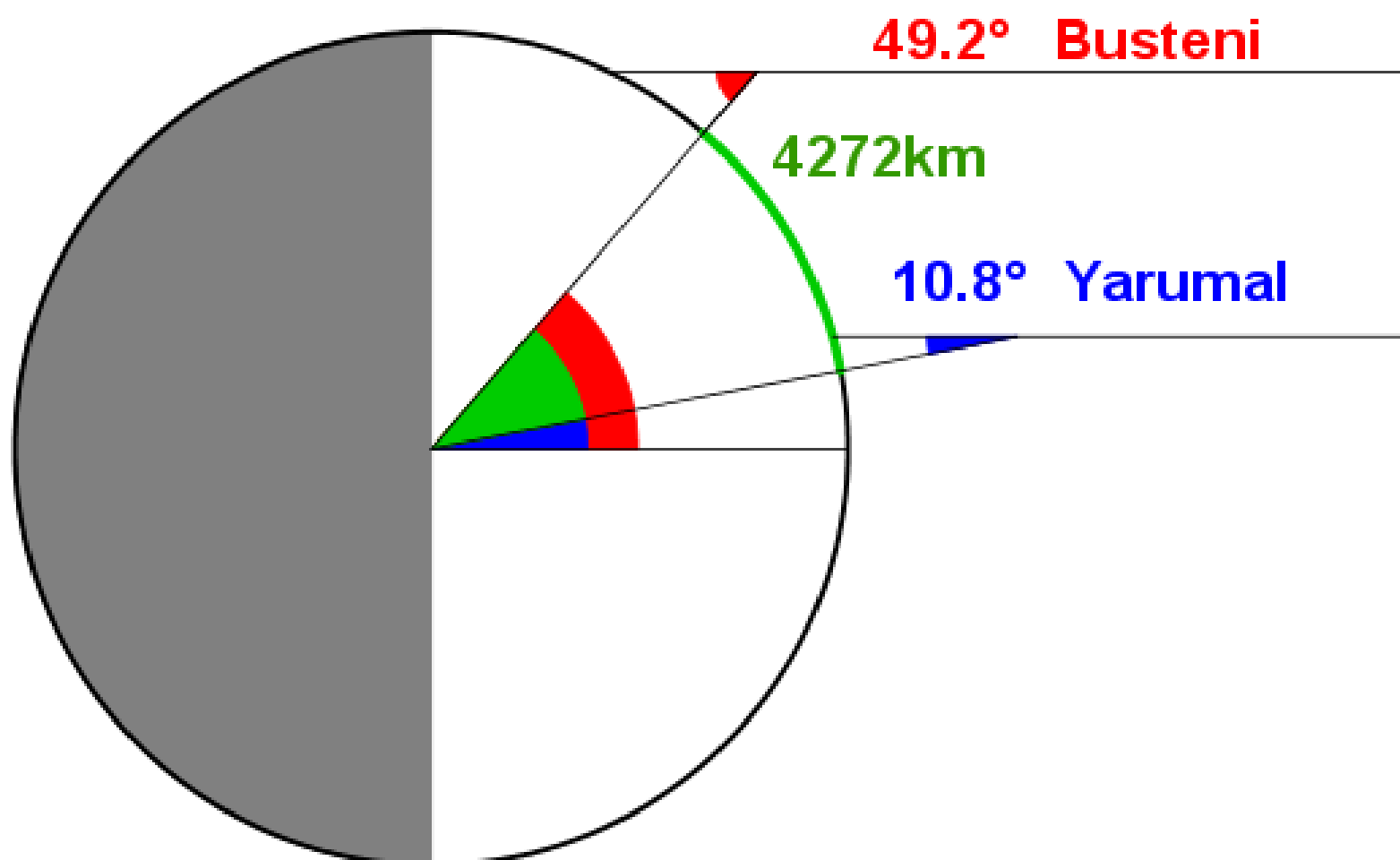


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Yarumal	Colombia	Institución Educativa San Luis	6.966	-75.416

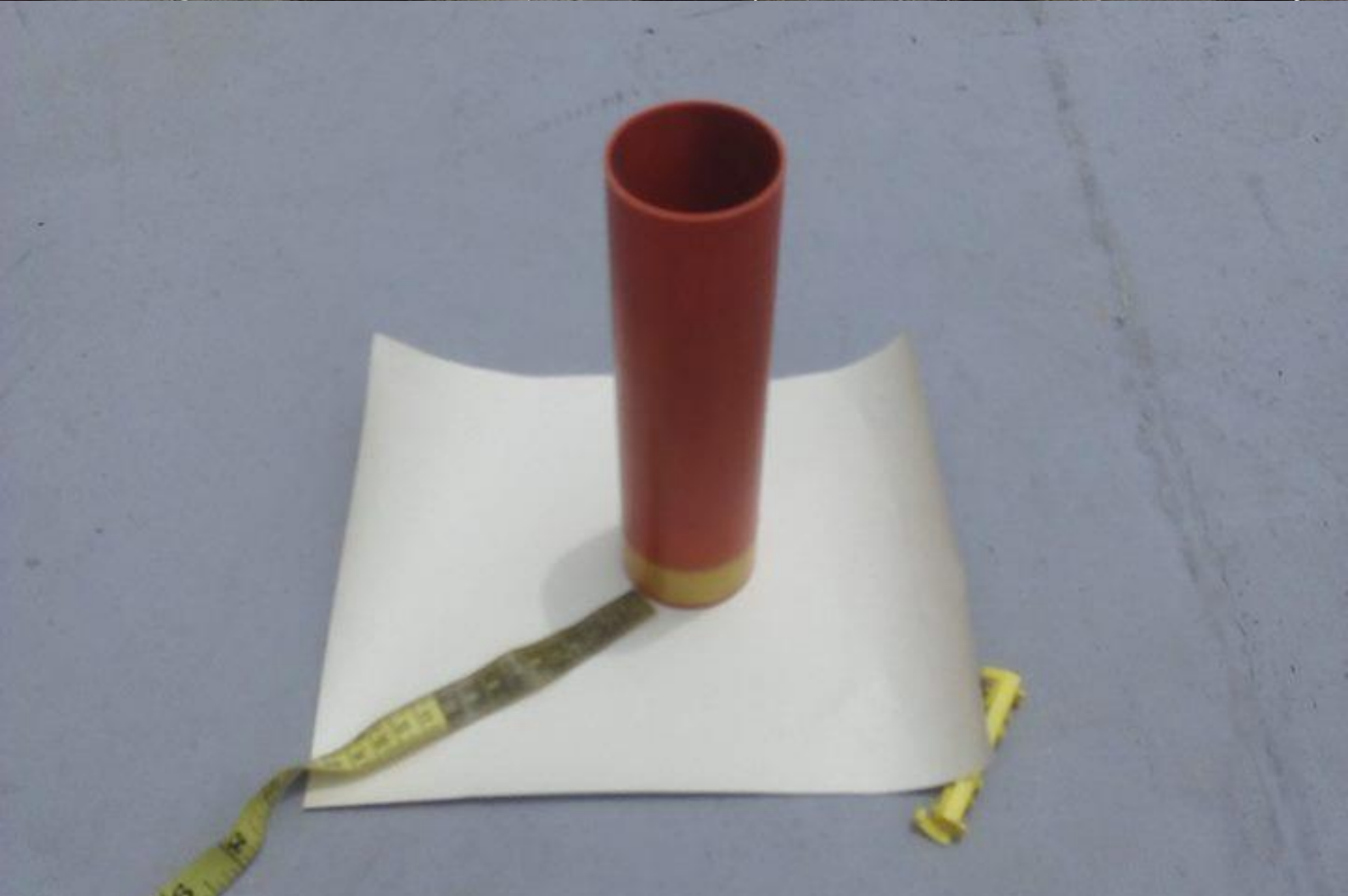
Date	Gnomon	Shadow	Angle
02 October 2018	22 cm	4.2 cm	10.8 °

02/10/2018 (Busteni-Romania) Latitude: 45.416°

02/10/2018 (Yarumal-Colombia) Latitude: 6.966°



$$\text{circumference} = \frac{360^\circ \times 4272\text{km}}{49.2^\circ - 10.8^\circ} = 40050 \text{ km}$$



City	Partner	Circumference (km)	Date
Aigio	Itajubá	40172	04 October
Alta Gracia	Piraeus	40071	10 October
Athens	Itajubá	40156	05 October
Bizerte	Lafrançaise	40235	01 October
Bršťanovo	Piranguinho	40036	10 October
Busteni	Piranguinho	39955	03 October
Dohoroi	Donji Muć	42570	25 October
Donji Muć	Itajubá	40064	04 October
Itajubá	Busteni	39955	23 October
Kuantan Semambu	Busteni	38378	05 October
Lafrançaise	Piranguinho	40077	12 October
Lucknow	Alta Gracia	39876	06 October
Margineni	Itajubá	40025	04 October
Margineni	Itajubá	40025	04 October
Petroupoli	Piranguinho	39897	10 October
Piraeus	Alta Gracia	40071	10 October
Piranguinho	Bršťanovo	40036	10 October
Pogana	Itajubá	40072	23 October
Pylos	Piranguinho	40980	10 October
Rio de Janeiro	Bršťanovo	38967	23 October
Rionegro	Lafrançaise	38935	04 October
Yamunanagar	Bršťanovo	40080	23 October
Yarumal	Busteni	40050	02 October
Average		40030	