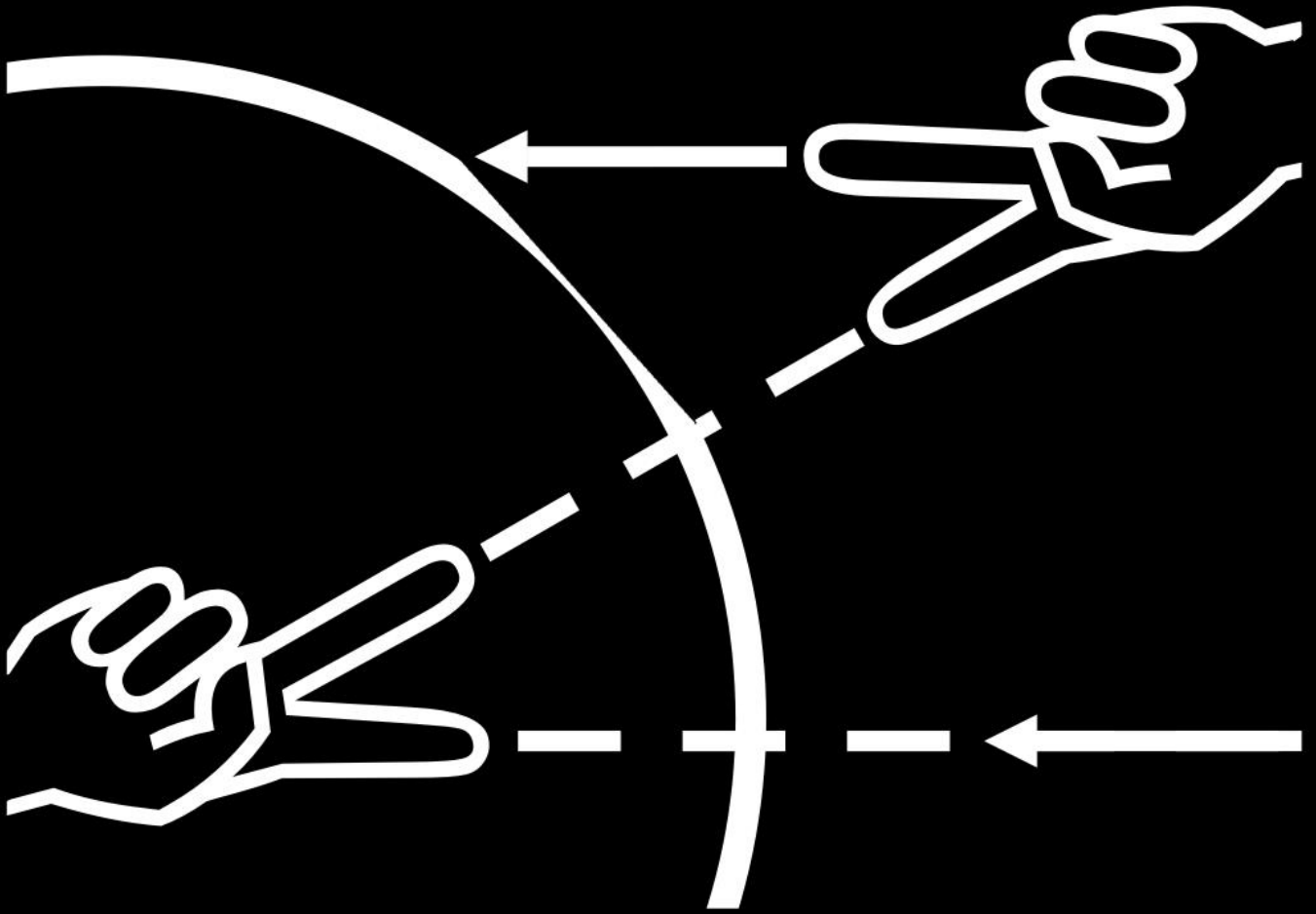


# Eratosthenes



February 2016

# 5 continents 10 countries 25 schools

Participated to the 67 february measurements.

ARGENTINA (1)

Anisacate

GREECE (12)

Aigio, Ano Komi, Athens Ilion, Athens Agion Anargyron, Ioannina, Komotini, Krokos, Lavrion, Makrynitsa, Pastida, Petroupoli, Piraeus

FRANCE (1)

Lafrançaise

ROMANIA (1)

Busteni

TUNISIA (3)

Ben Arous, Sfax, Tunis

MALAYSIA (1)

Kuantan

AUSTRALIA (2)

Perth, Fremantle

BRAZIL (2)

Rio de Janeiro (CENOM), Rio de Janeiro (Ribeiro)

INDIA (1)

Yamunanagar


CHINA (1)

Shenzhen

# Aigio, Greece

February 2016

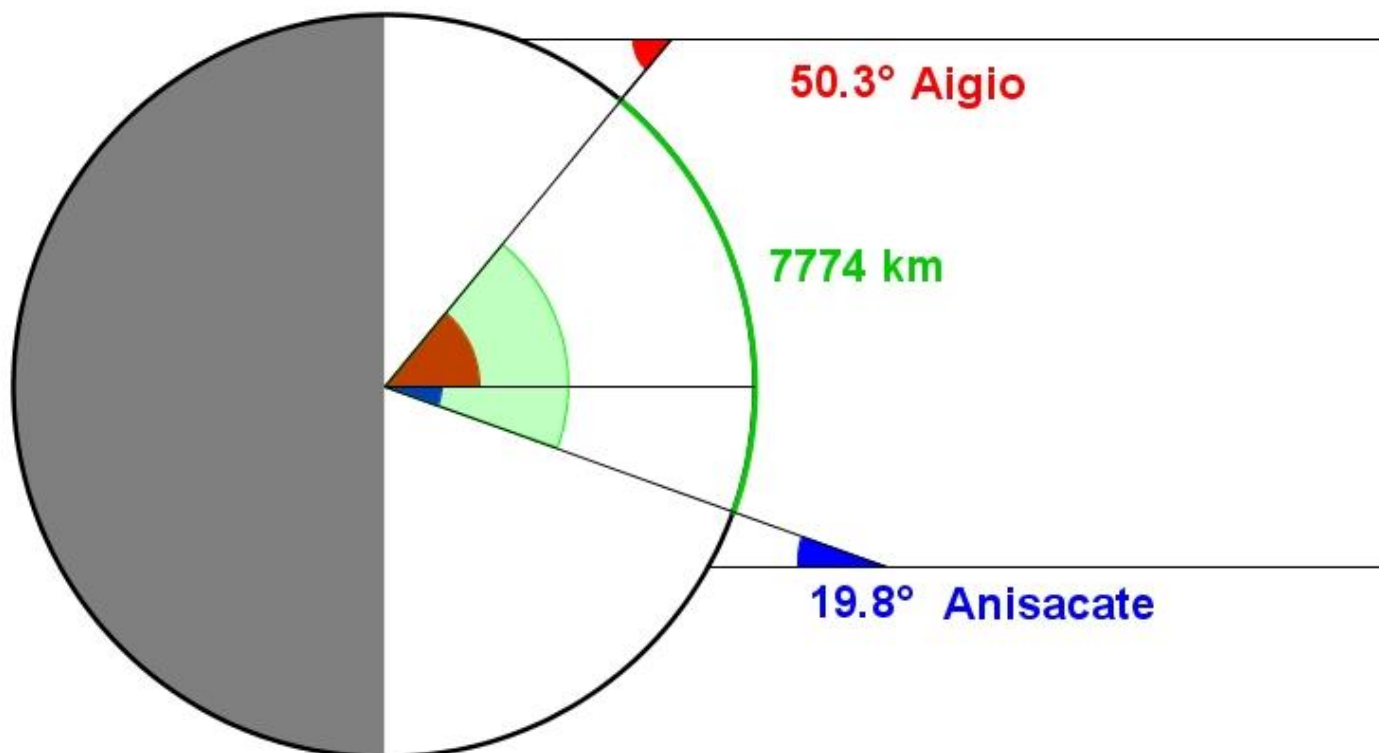


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079

Date	Gnomon	Shadow	Angle
03 February	50 cm	71 cm	54.8°
17 February	50 cm	60.3 cm	50.3°
25 February	50 cm	54.5 cm	47.5°

17 february 2016 (Aigio-GREECE) Latitude: 38.252 °

17 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °



$$\text{circumference} = \frac{360^\circ \times 7774 \text{ km}}{50.3^\circ + 19.8^\circ} = 39924 \text{ km}$$

# Anisacate, Argentina

February 2016

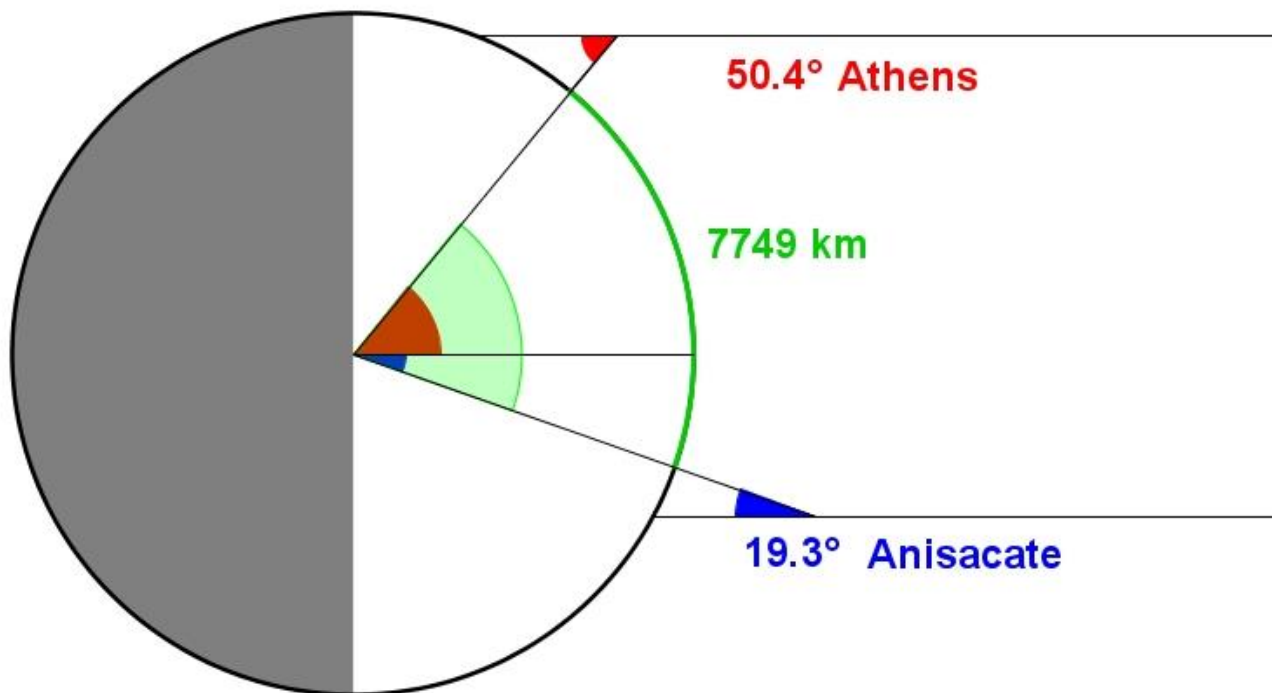


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Anisacate	Argentina	Fundación Caminos de Anisacate	-31.717	-64.400

Date	Gnomon	Shadow	Angle
02 February	100 cm	-27 cm	-15.1°
11 February	100 cm	-32 cm	-17.7°
15 February	100 cm	-34.5 cm	-19°
16 February	100 cm	-35 cm	-19.3°
17 February	100 cm	-36 cm	-19.8°
21 February	100 cm	-39 cm	-21.3°
22 February	100 cm	-39.8 cm	-21.7°
25 February	100 cm	-42 cm	-22.8°
28 February	100 cm	-44.3 cm	-23.9°
29 February	100 cm	-45 cm	-24.2°

16 february 2016 (Athens-GREECE) Latitude: 38.027 °

16 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7749 \text{ km}}{50.4^\circ + 19.3^\circ} = 40024 \text{ km}$$

# Ano Komi, Greece

February 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ano Komi	Greece	Ano Komi Kozanis	40.226	21.831

Date	Gnomon	Shadow	Angle
03 February	100 cm	158.5 cm	57.8°

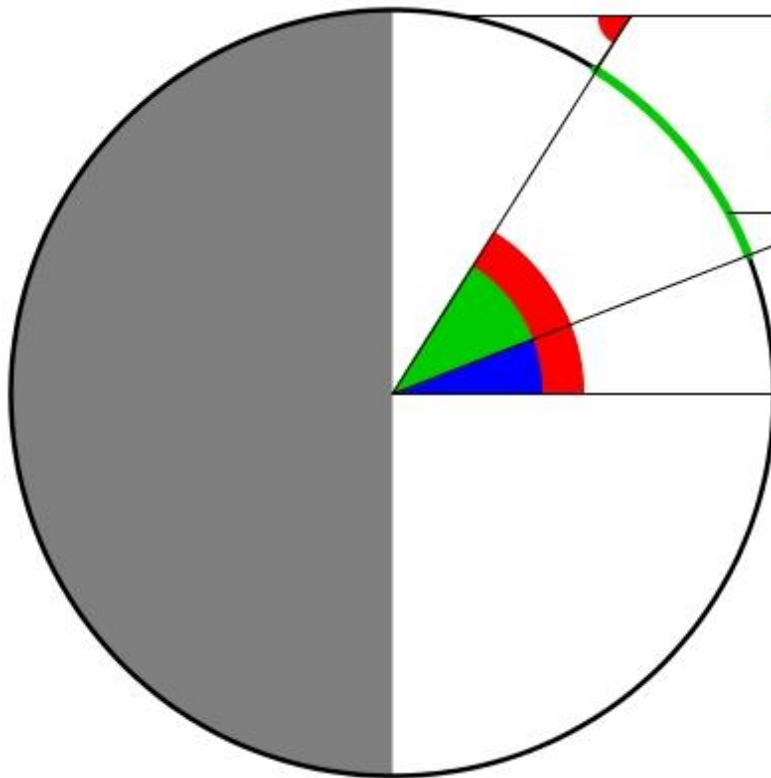
03 february 2016 (Ano Komi-GREECE) Latitude: 40.226°

03 february 2016 (Kuantan-MALAYSIA) Latitude: 3.827°

57.8° Ano Komi

4044 km

21.3° Kuantan



$$\text{circumference} = \frac{360^\circ \times 4044 \text{ km}}{57.8^\circ - 21.3^\circ} = 39886 \text{ km}$$

# Athens-A, Greece

February 2016

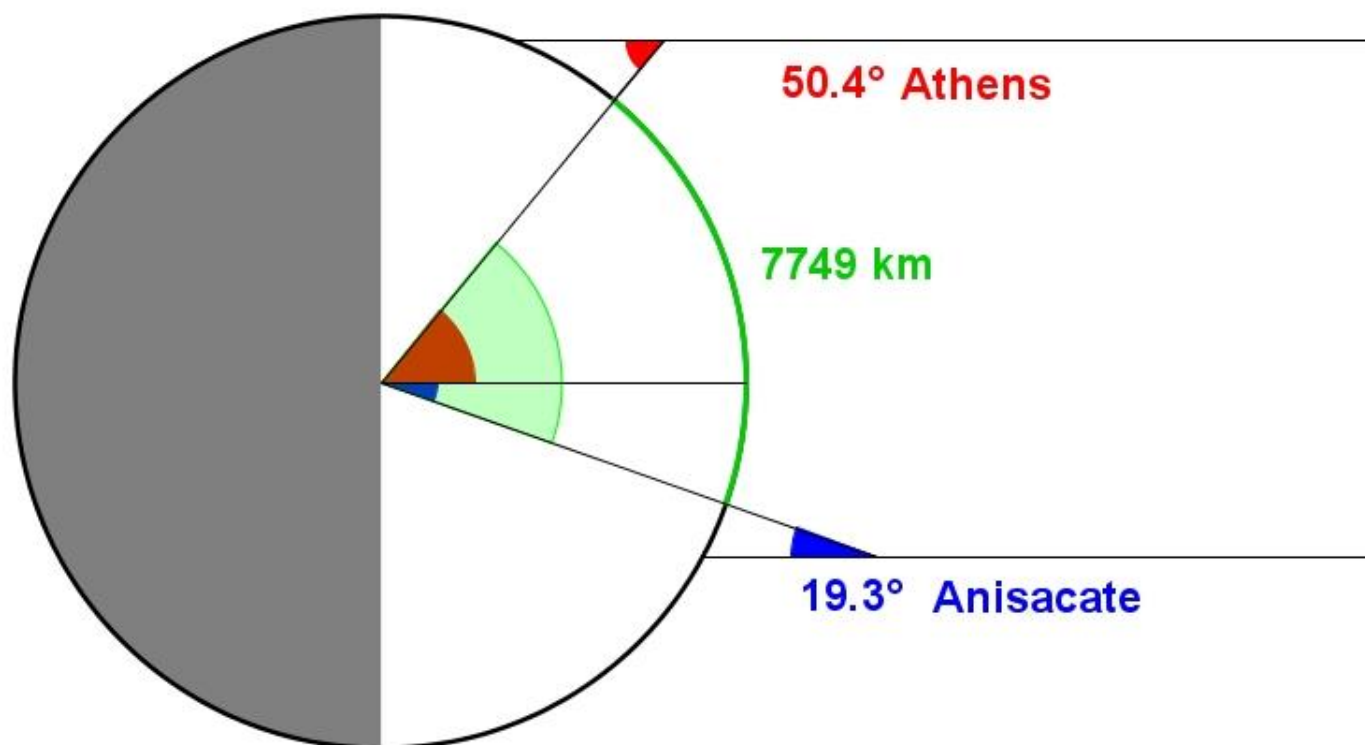


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
01 February	49 cm	70.8 cm	55.3°
03 February	49 cm	69.3 cm	54.7°
12 February	49 cm	61.7 cm	51.5°
16 February	49 cm	59.3 cm	50.4°
19 February	49 cm	56.9 cm	49.3°

16 february 2016 (Athens-GREECE) Latitude: 38.027 °

16 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °



$$\text{circumference} = \frac{360^\circ \times 7749 \text{ km}}{50.4^\circ + 19.3^\circ} = 40024 \text{ km}$$

# Athens-I, Greece

February 2016

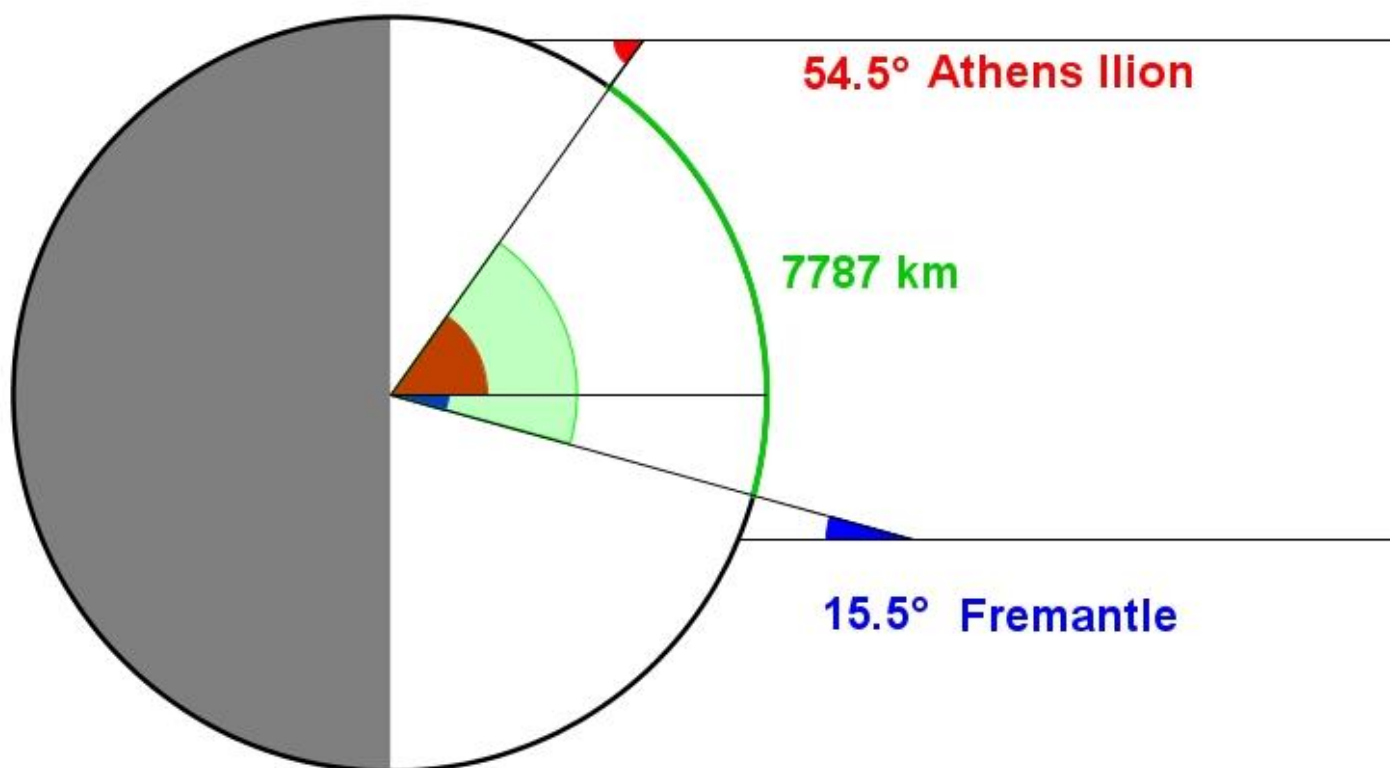


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	3rd Junior High School of Ilion	38.037	23.712

Date	Gnomon	Shadow	Angle
02 February	100 cm	144 cm	55.2°
08 February	100 cm	140 cm	54.5°
15 February	100 cm	124 cm	51.1°
19 February	100 cm	114 cm	48.7°
29 February	100 cm	103 cm	45.8°

8 february 2016 (Athens Ilion-GREECE) Latitude: 38.037 °

8 february 2016 (Fremantle-AUSTRALIA) Latitude: -32.055 °




$$\text{circumference} = \frac{360^\circ \times 7787 \text{ km}}{54.5^\circ + 15.5^\circ} = 40047 \text{ km}$$

# Ben Arous, Tunisia

February 2016

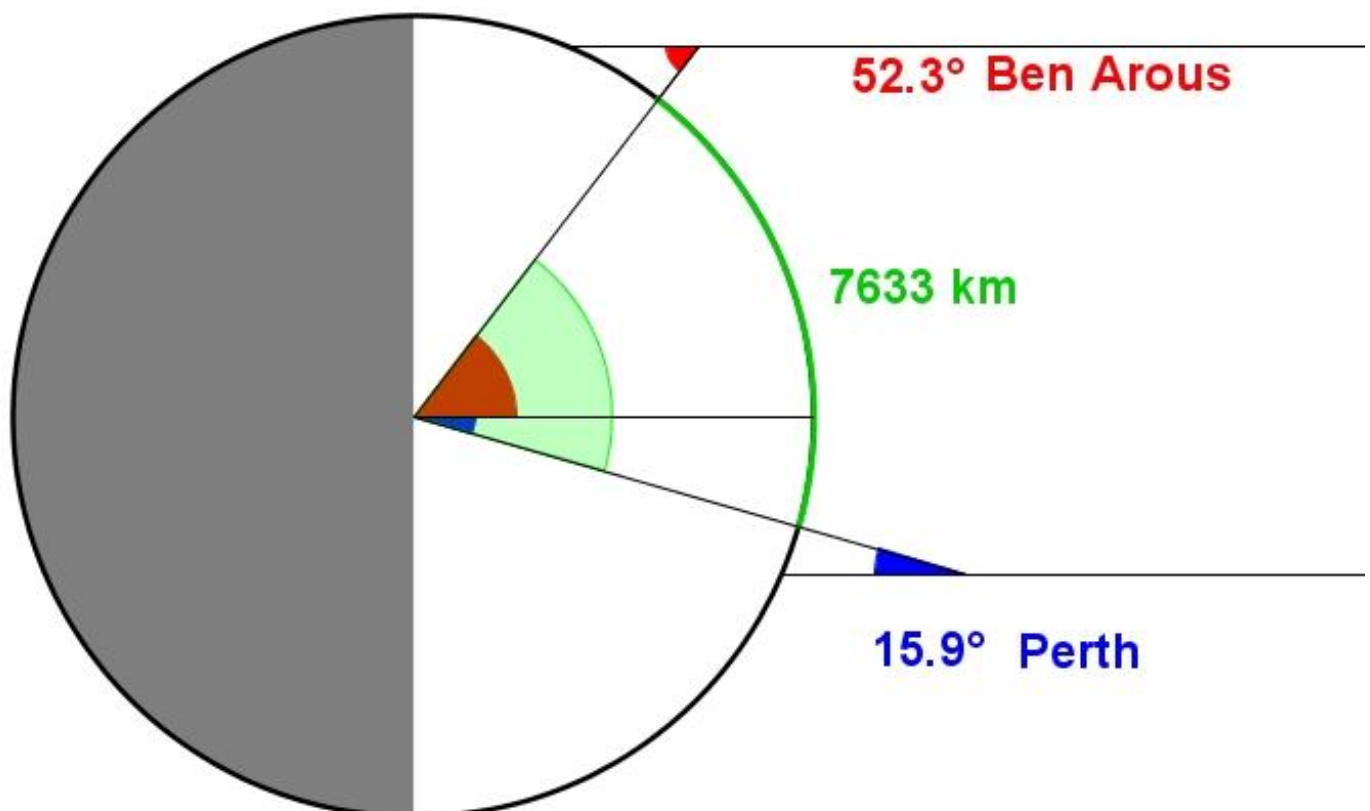


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ben Arous	Tunisia	College Ben Arous	36.750	10.222

Date	Gnomon	Shadow	Angle
02 February	24 cm	39.5 cm	58.7°
03 February	40 cm	52.8 cm	52.9°
05 February	40 cm	51.8 cm	52.3°
11 February	40 cm	51.5 cm	52.2°
15 February	70 cm	91 cm	52.4°

5 february 2016 (Ben Arous-TUNISIA) Latitude: 36.75 °

6 february 2016 (Perth-AUSTRALIA) Latitude: -31.957 °



$$\text{circumference} = \frac{360^\circ \times 7633 \text{ km}}{52.3^\circ + 15.9^\circ} = 40291 \text{ km}$$



# Busteni, Romania

February 2016



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

Date	Gnomon	Shadow	Angle
03 February	22 cm	42.5 cm	62.6°
23 February	22 cm	32.4 cm	55.8°

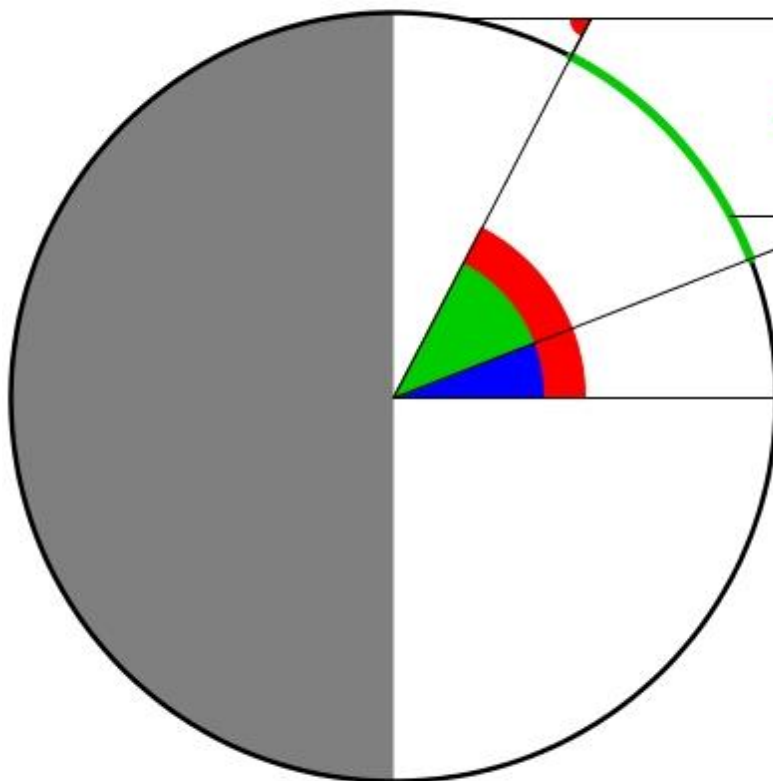
03 february 2016 (Busteni-ROMANIA) Latitude: 45.416°

03 february 2016 (Kuantan-MALAYSIA) Latitude: 3.827°

62.6° Busteni

4621 km

21.3° Kuantan




$$\text{circumference} = \frac{360^\circ \times 4621 \text{ km}}{62.6^\circ - 21.3^\circ} = 40280 \text{ km}$$

# Fremantle, Australia

February 2016

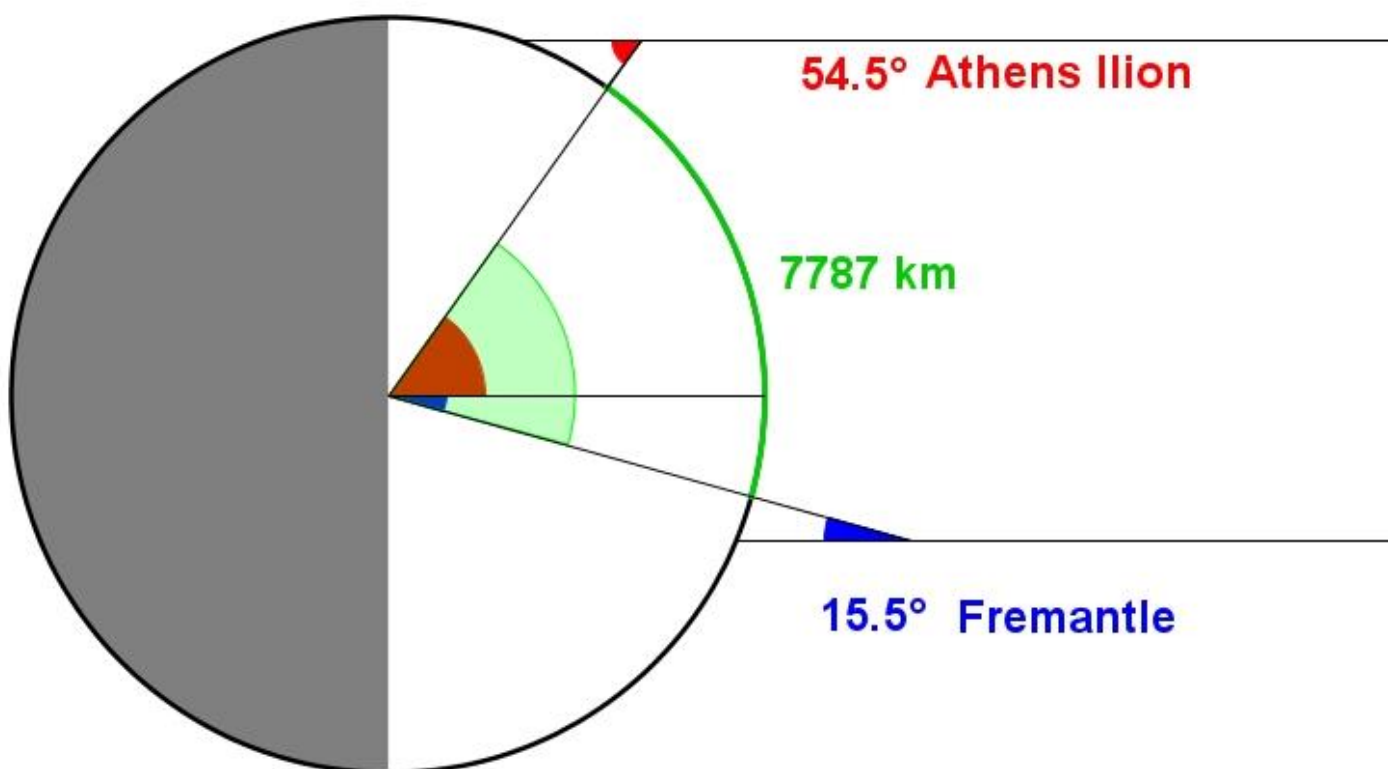


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Fremantle	Australia	Fremantle Prison	-32.055	115.754

Date	Gnomon	Shadow	Angle
08 February	105 cm	-29.1 cm	-15.5°

8 february 2016 (Athens Ilion-GREECE) Latitude: 38.037 °

8 february 2016 (Fremantle-AUSTRALIA) Latitude: -32.055 °




$$\text{circumference} = \frac{360^\circ \times 7787 \text{ km}}{54.5^\circ + 15.5^\circ} = 40047 \text{ km}$$

# Ioannina, Greece

February 2016

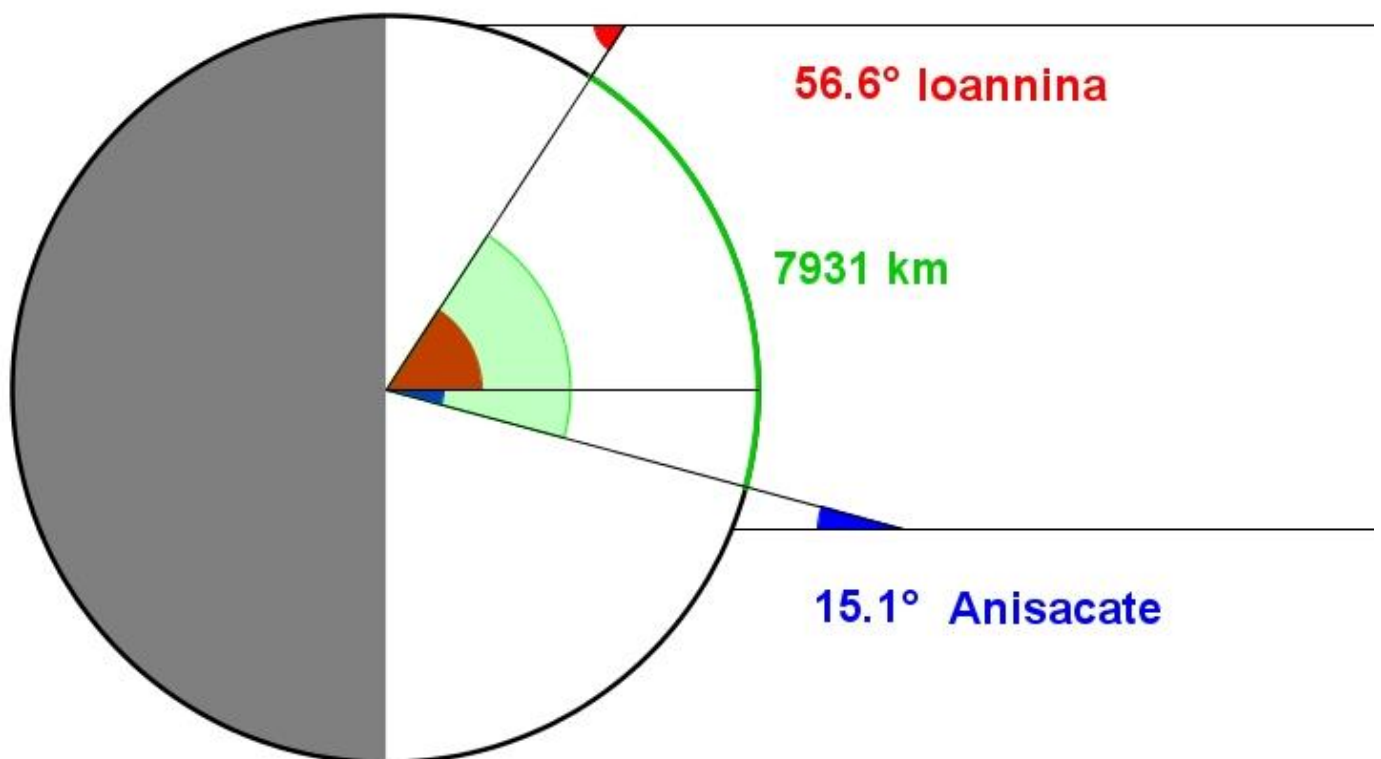


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ioannina	Greece	Experimental College	39.666	20.845

Date	Gnomon	Shadow	Angle
02 February	100 cm	151.45 cm	56.6°
03 February	100 cm	149.2 cm	56.2°

2 february 2016 (Ioannina-GREECE) Latitude: 39.667 °

2 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7931 \text{ km}}{56.6^\circ + 15.1^\circ} = 39821 \text{ km}$$

# Komotini, Greece

February 2016

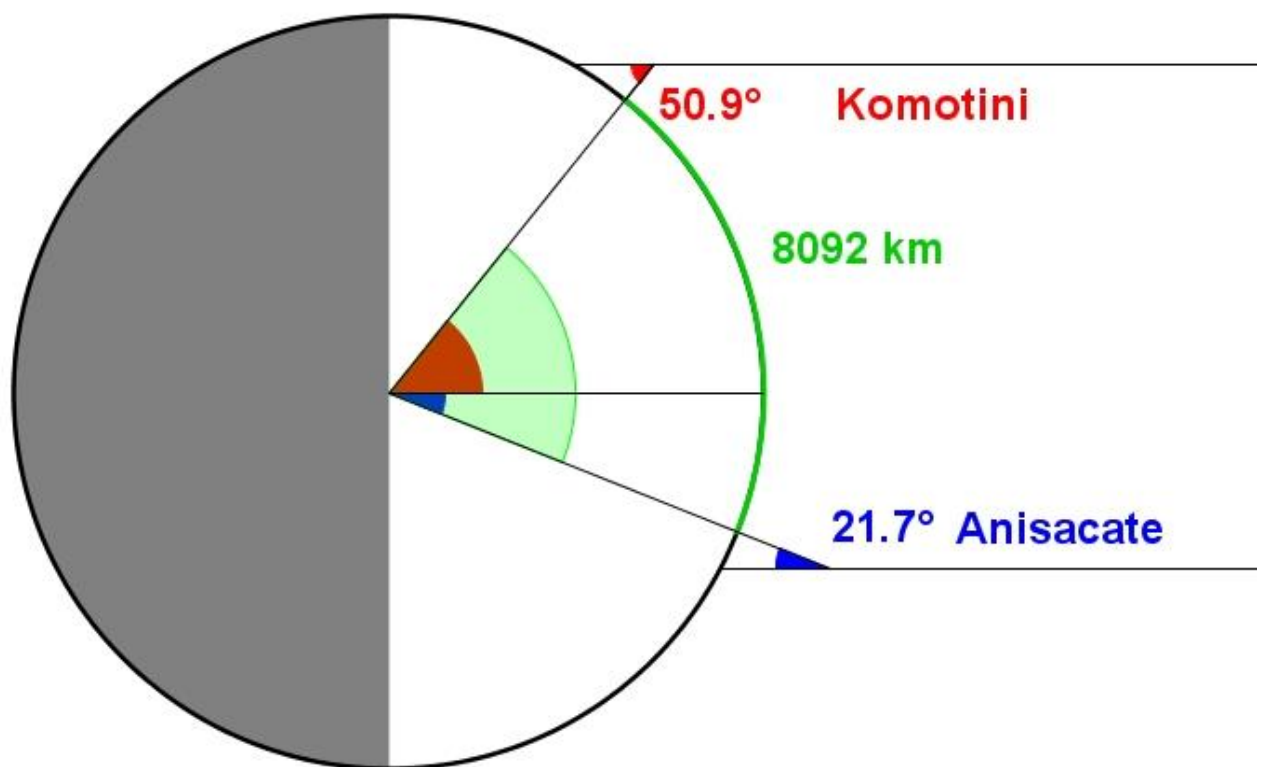


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Komotini	Greece	3rd Junior High School Komotini	41.121	25.394

Date	Gnomon	Shadow	Angle
22 February	100 cm	123.2 cm	50.9°
23 February	100 cm	121.5 cm	50.5°

22 February 2016 (Komotini-GREECE 41.121)

22 February 2016 (Anisacate-ARGENTINA - 31.717 )




$$\text{circumference} = \frac{360^\circ \times 8092 \text{ km}}{50.9^\circ + 21.7^\circ} = 40126 \text{ km}$$

# Krokos, Greece

February 2016

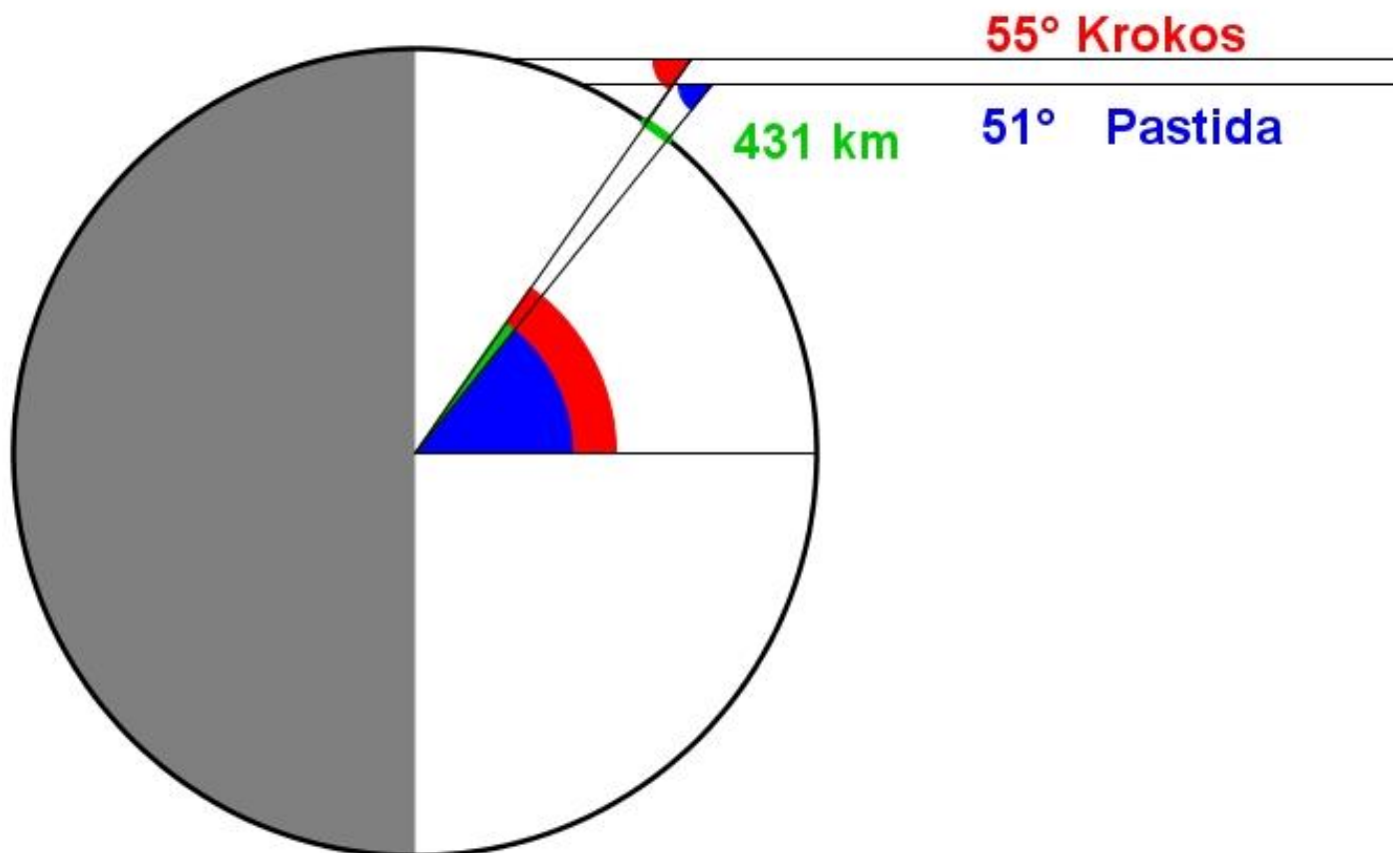


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Krokos	Greece	Junior High School of Krokos	40.265	21.815

Date	Gnomon	Shadow	Angle
09 February	19.4 cm	27.7 cm	55°

09 february 2016 (Krokos-GREECE) Latitude: 40.265°

10 february 2016 (Pastida-GREECE) Latitude: 36.385°




$$\text{circumference} = \frac{360^\circ \times 431 \text{ km}}{55^\circ - 51^\circ} = 38790 \text{ km}$$

# Kuantan, Malaysia

February 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Kuantan	Malaysia	SMK St Thomas	3.817	103.333

Date	Gnomon	Shadow	Angle
03 February	72 cm	28 cm	21.3°
12 February	61.5 cm	15.6 cm	14.2°
03 February	72 cm	24.8 cm	19°

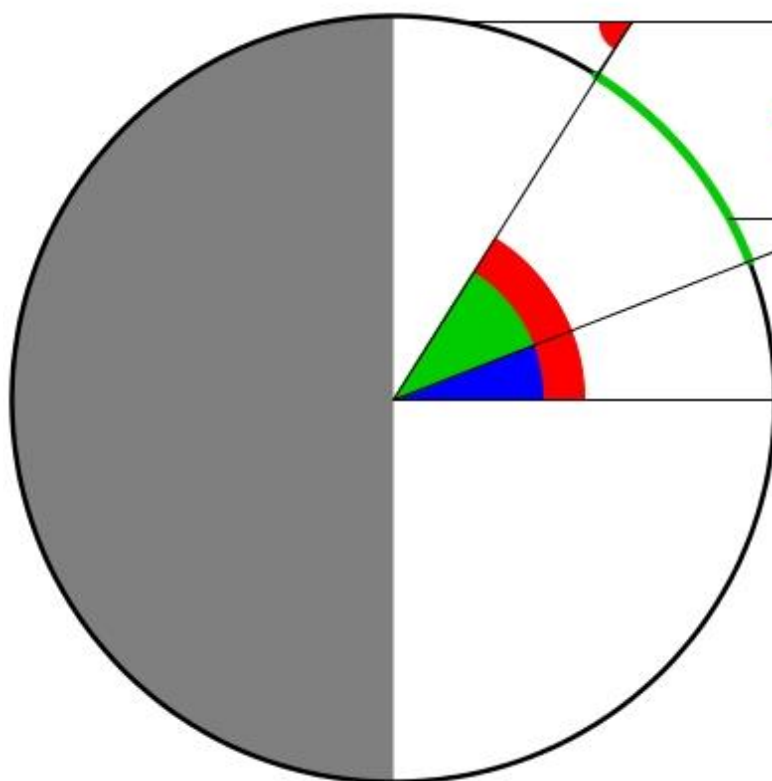
03 february 2016 (Ano Komi-GREECE) Latitude: 40.226°

03 february 2016 (Kuantan-MALAYSIA) Latitude: 3.827°

57.8° Ano Komi

4044 km

21.3° Kuantan




$$\text{circumference} = \frac{360^\circ \times 4044 \text{ km}}{57.8^\circ - 21.3^\circ} = 39886 \text{ km}$$

# Lafrançaise, France

February 2016

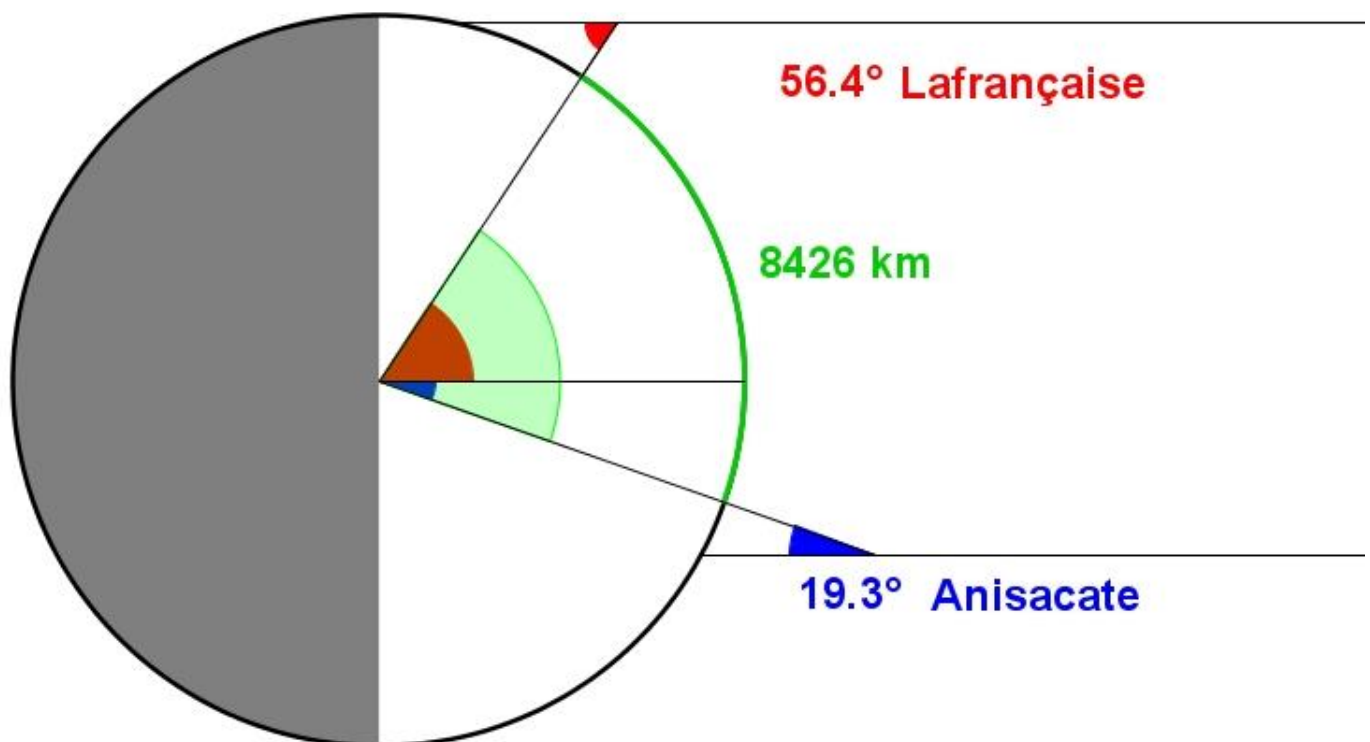


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237

Date	Gnomon	Shadow	Angle
01 February	100 cm	180 cm	60.9°
04 February	100 cm	174 cm	60.1°
08 February	100 cm	166 cm	58.9°
15 February	100 cm	151 cm	56.5°
16 February	100 cm	150.5 cm	56.4°
18 February	100 cm	146 cm	55.6°

16 february 2016 (Lafrançaise-FRANCE) Latitude: 44.127 °

16 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 8426 \text{ km}}{56.4^\circ + 19.3^\circ} = 40071 \text{ km}$$

# Lavrion, Greece

February 2016

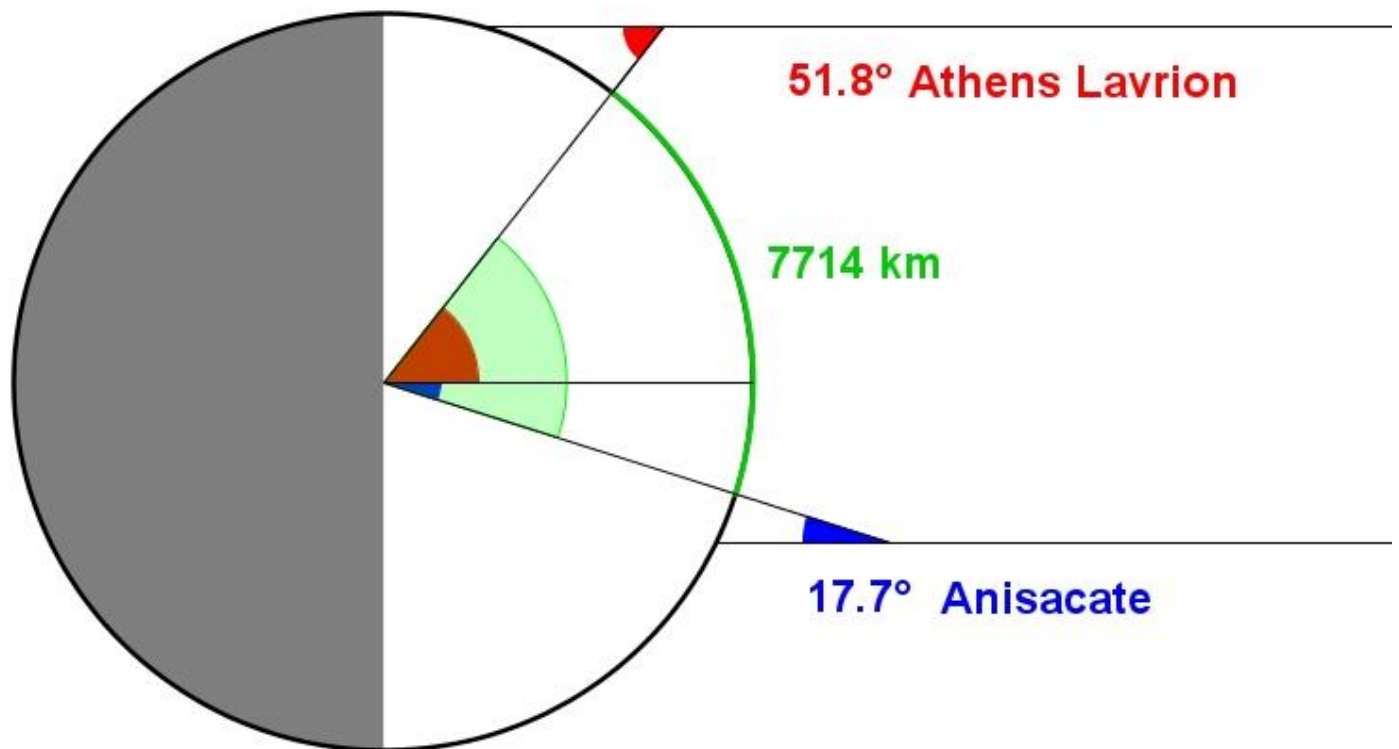


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lavrion	Greece	4o Junior High School Petroupoli	37.725	24.050

Date	Gnomon	Shadow	Angle
11 February	30.4 cm	38.6 cm	51.8°

11 february 2016 (Athens Lavrion-GREECE) Latitude: 37.72 °

11 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7714 \text{ km}}{51.8^\circ + 17.7^\circ} = 39957 \text{ km}$$



# Makrynitsa, Greece

February 2016

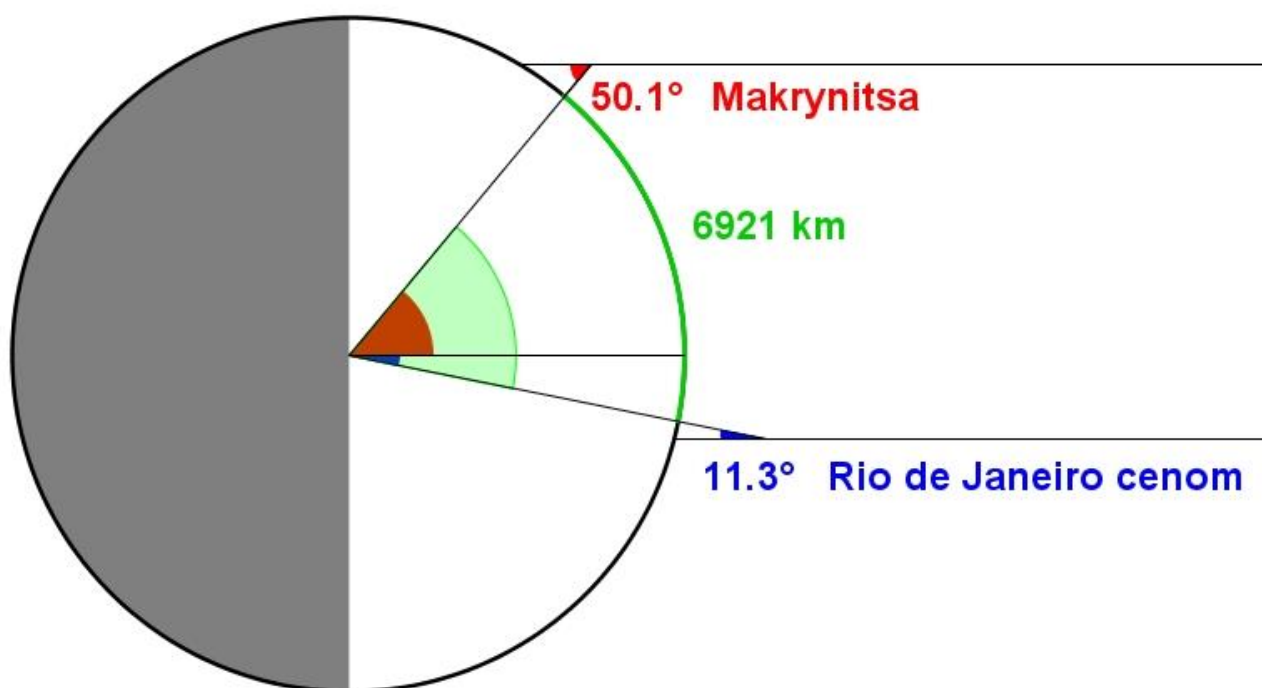


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Makrynitsa	Greece	4o Junior High School Petroupoli	39.402	22.985

Date	Gnomon	Shadow	Angle
19 February	30.4 cm	36.4 cm	50.1°

19 February 2016 (Makrynitsa-GREECE 39.402°)

19 February 2016 (Rio de Janeiro cenom-BRASIL - 22.89°)




$$\text{circumference} = \frac{360^\circ \times 6921 \text{ km}}{50.1^\circ + 11.3^\circ} = 40579 \text{ km}$$

# Pastida, Greece

February 2016

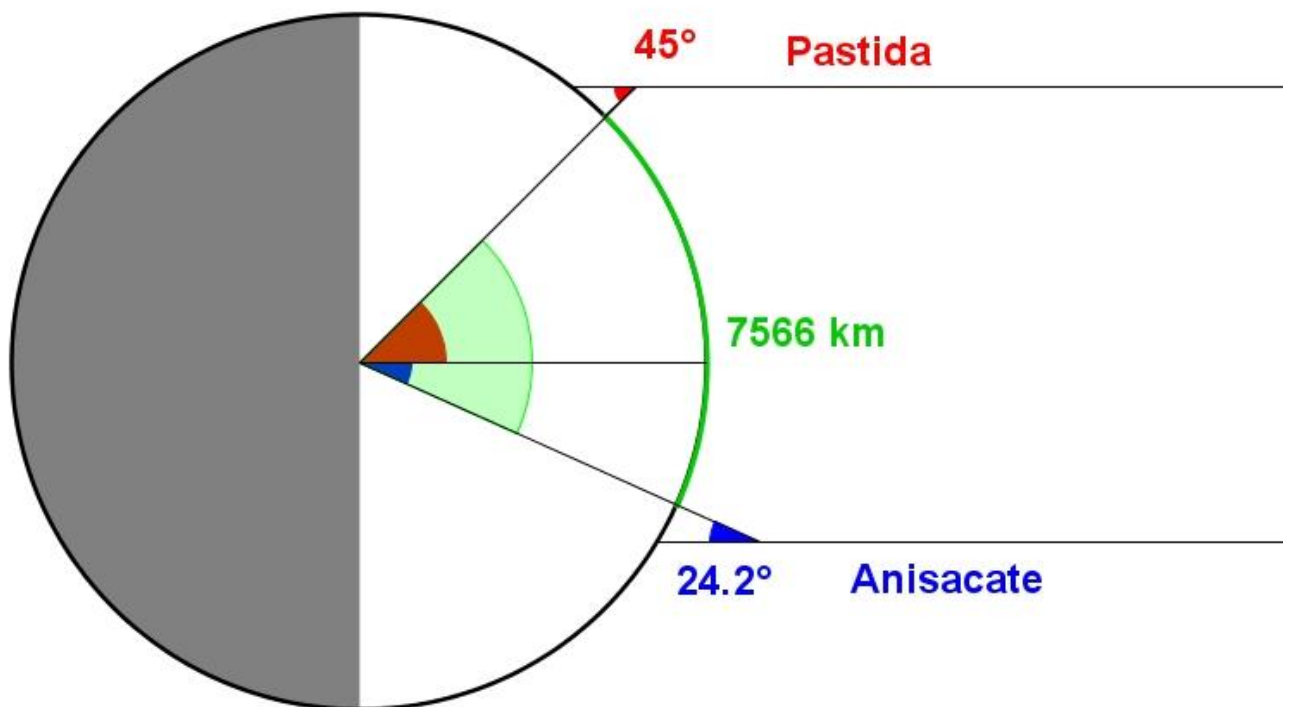


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Pastida	Greece	Primary School of Pastida	36.385	28.138

Date	Gnomon	Shadow	Angle
03 February	34.8 cm	45 cm	52.3°
10 February	34.8 cm	43 cm	51°
29 February	34.8 cm	32.5 cm	43°

29 february 2016 (Pastida-GREECE ) Latitude: 36.385

29 february 2016 (Anisacate-ARGENTINA ) Latitude: - 31.717




$$\text{circumference} = \frac{360^\circ \times 7566 \text{ km}}{45^\circ + 24.2^\circ} = 39361 \text{ km}$$

# Perth, Australia

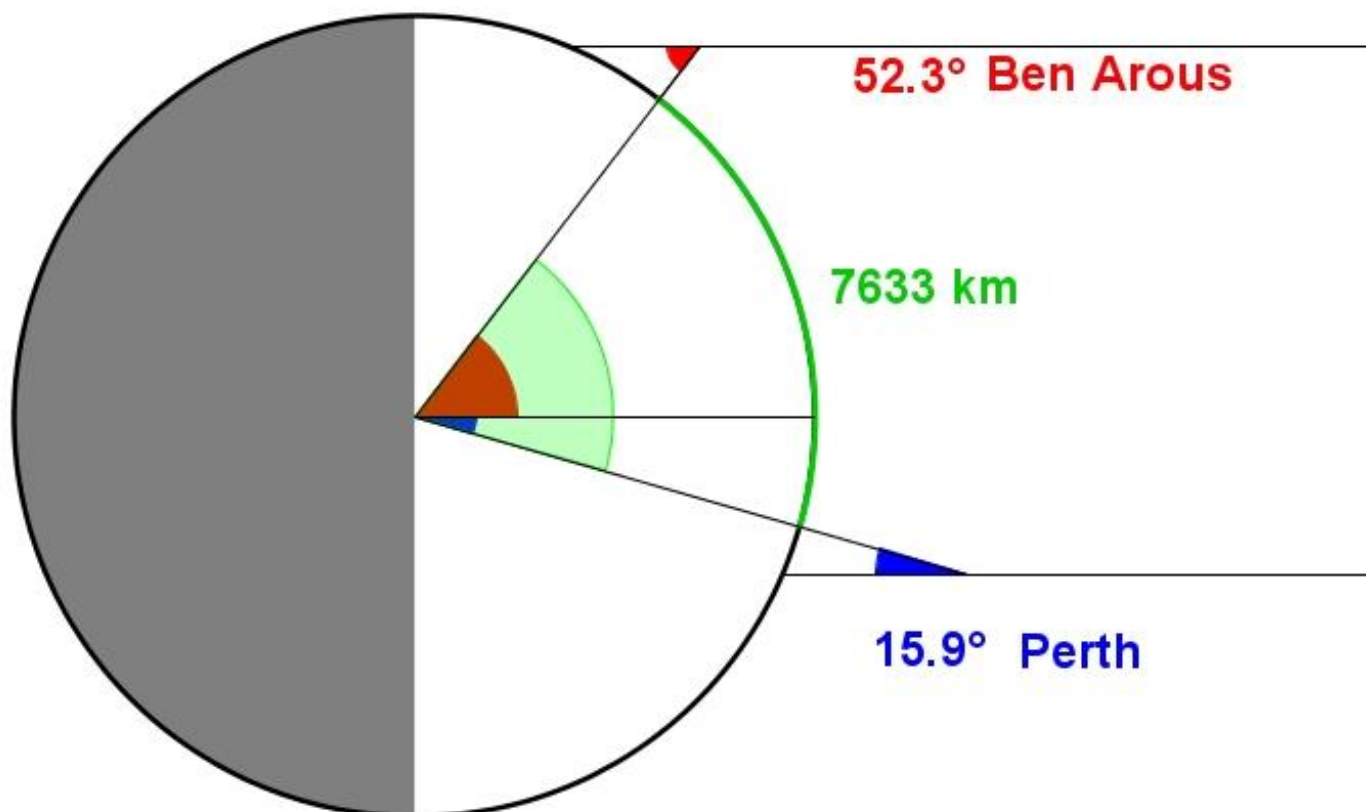
February 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Perth	Australia	The Perth Mint - Gold Court House	-31.957	115.869

Date	Gnomon	Shadow	Angle
06 February	106 cm	-30.1 cm	-15.9°

5 february 2016 (Ben Arous-TUNISIA) Latitude: 36.75 °  
6 february 2016 (Perth-AUSTRALIA) Latitude: -31.957 °




$$\text{circumference} = \frac{360^\circ \times 7633 \text{ km}}{52.3^\circ + 15.9^\circ} = 40291 \text{ km}$$

# Petroupoli, Greece

February 2016

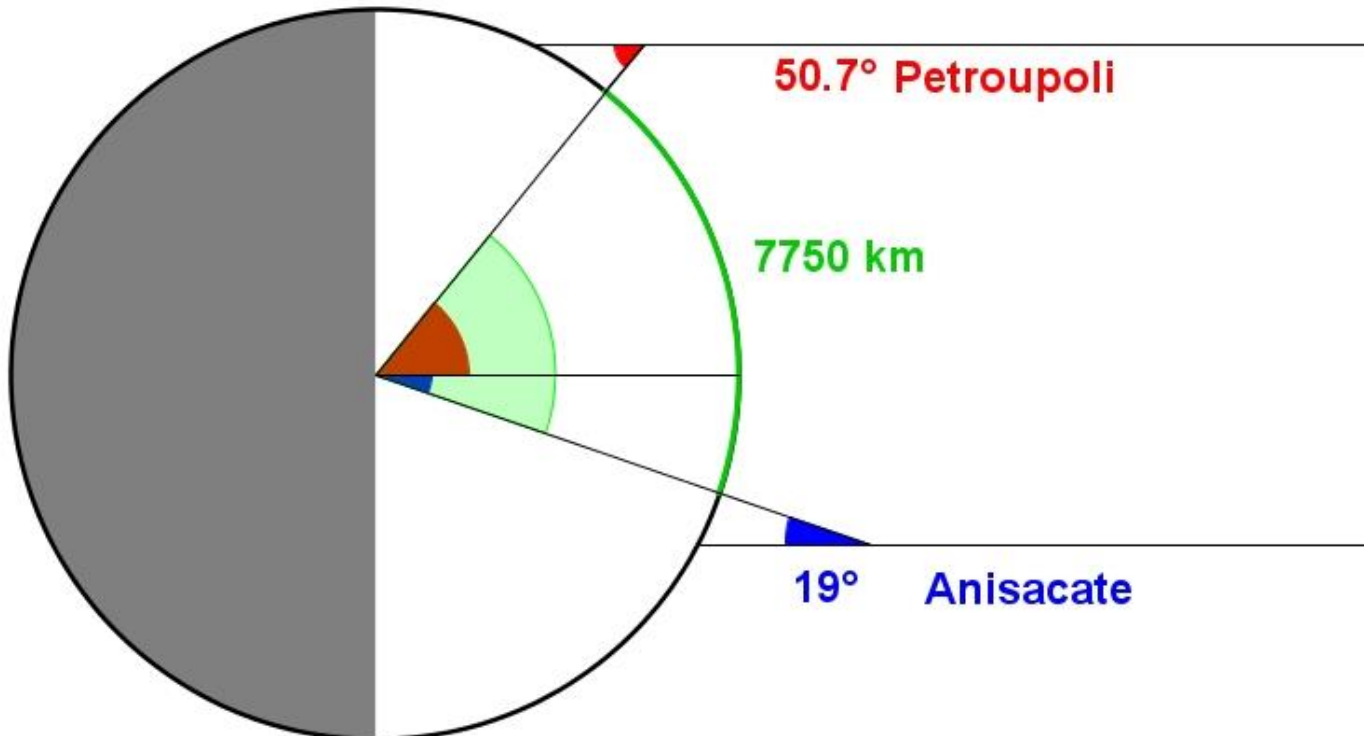


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Petroupoli	Greece	4o Junior High School	38.036	23.674

Date	Gnomon	Shadow	Angle
02 February	100 cm	143 cm	55°
03 February	52.3 cm	73.8 cm	54.7°
08 February	52.3 cm	69.8 cm	53.2°
15 February	52.3 cm	63.8 cm	50.7°
22 February	52.3 cm	59.6 cm	48.3°
29 February	52.3 cm	52.7 cm	45.2°

15 february 2016 (Petroupoli-GREECE) Latitude: 38.036 °

15 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7750 \text{ km}}{50.7^\circ + 19^\circ} = 40029 \text{ km}$$

# Piraeus, Greece

February 2016

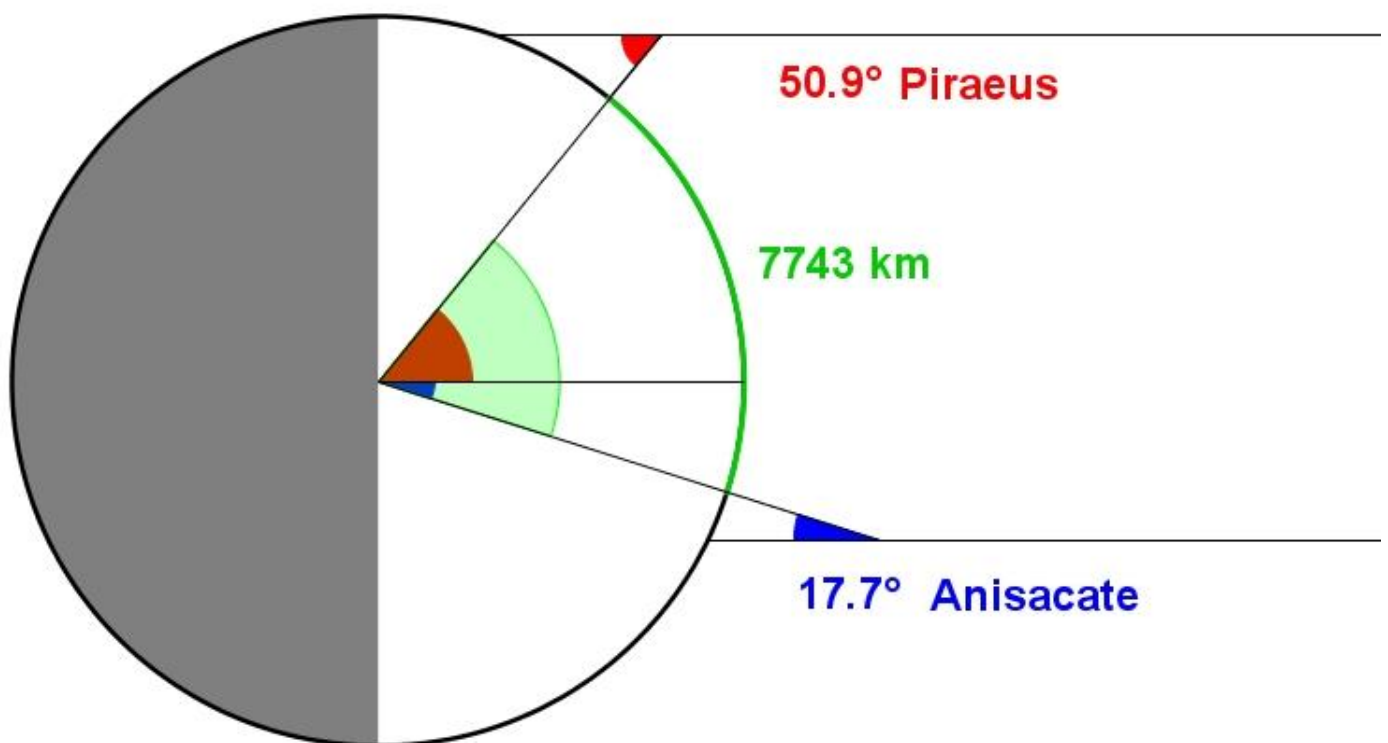


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655

Date	Gnomon	Shadow	Angle
11 February	100 cm	123 cm	50.9°
18 February	100 cm	123.5 cm	51.0°

11 february 2016 (Piraeus-GREECE) Latitude: 37.977 °

11 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7743 \text{ km}}{50.9^\circ + 17.7^\circ} = 40634 \text{ km}$$

# Rio de Janeiro, Brazil

February 2016

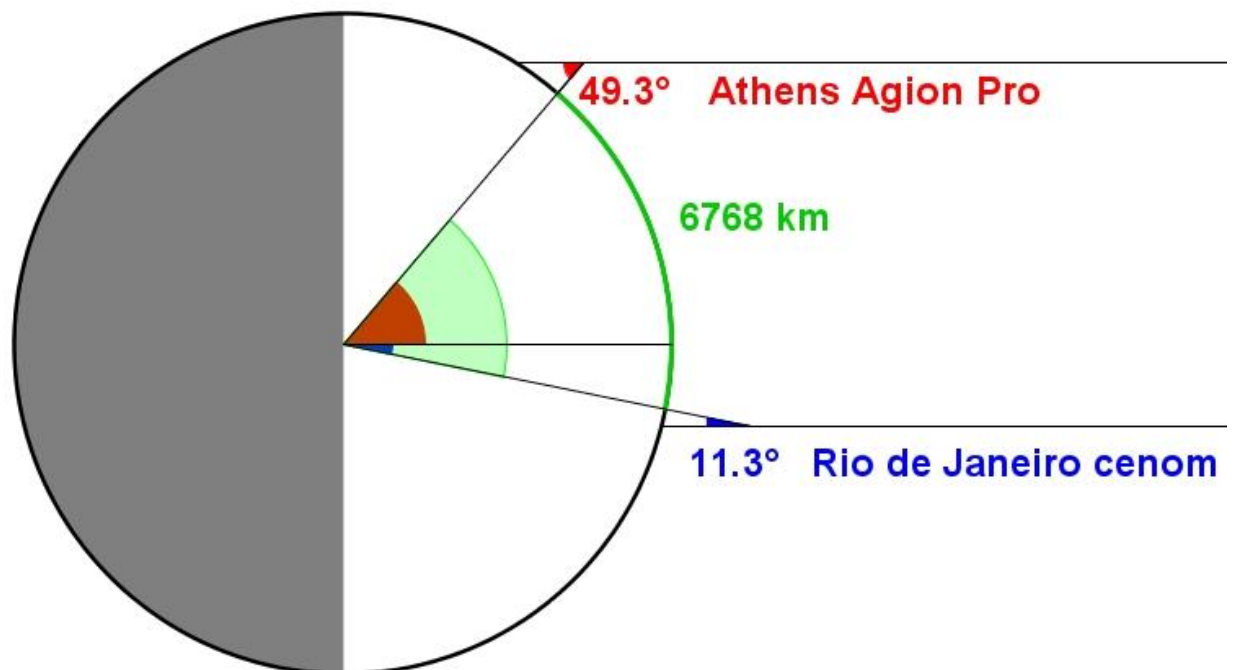


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
04 February	50 cm	-4 cm	-4.6°
19 February	50 cm	-10cm	-11.3°

19 February 2016 ( Athens Agion Pro-GREECE 38.027°)

19 February 2016 (Rio de Janeiro cenom-BRASIL - 22.89°)




$$\text{circumference} = \frac{360^\circ \times 6768 \text{ km}}{49.3^\circ + 11.3^\circ} = 40206 \text{ km}$$

# Rio de Janeiro, Brazil

February 2016

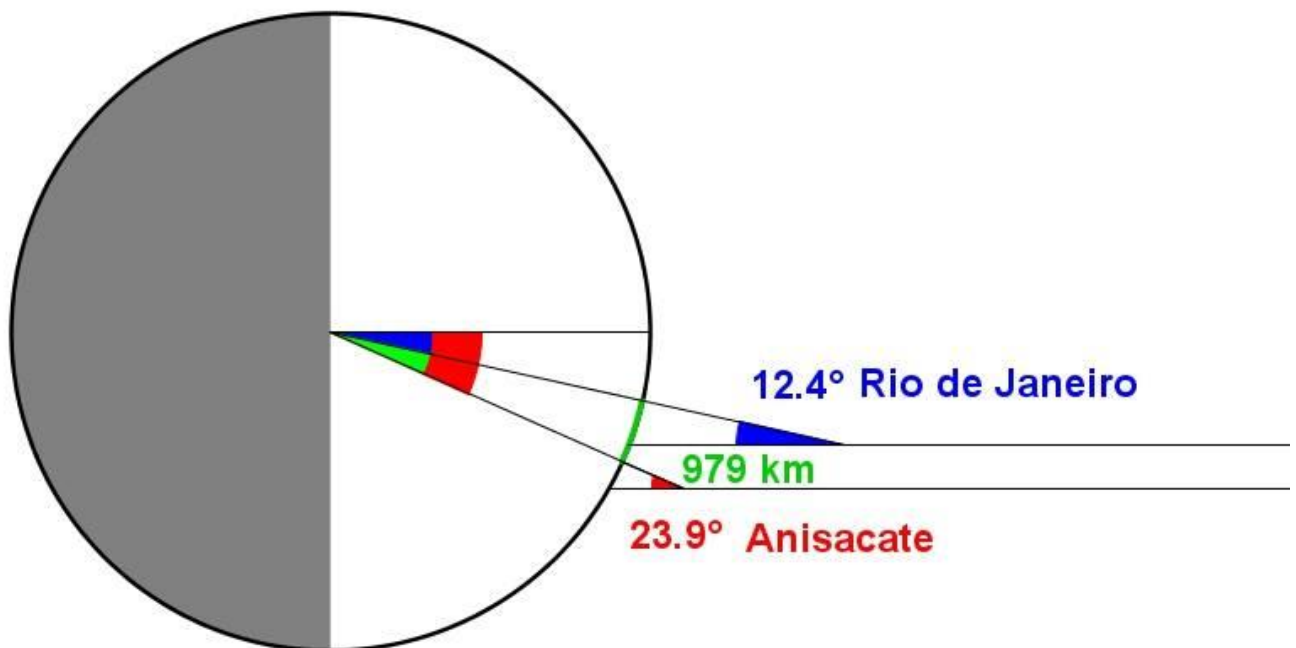


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Escola Municipal Bento Ribeiro	-22.904	-43.280

Date	Gnomon	Shadow	Angle
27 February	105 cm	-23 cm	-12.4°

28 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717°S  
 27 february 2016 (Rio de Janeiro-BRASIL) Latitude: -22.904°N




$$\text{circumference} = \frac{360^\circ \times 979 \text{ km}}{23.9^\circ - 12.4^\circ} = 30647 \text{ km}$$

# Sfax, Tunisia

February 2016

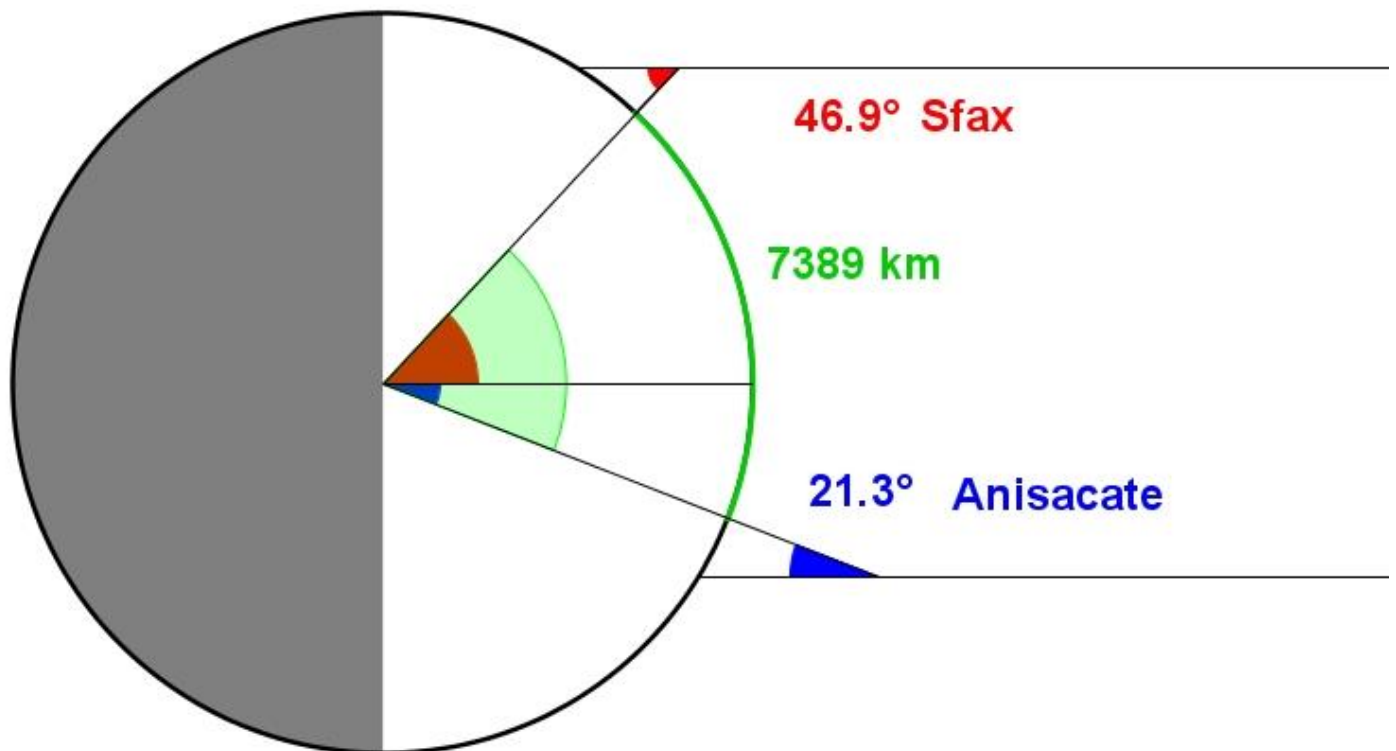


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Sfax	Tunisia	école de Sakiét Eddayer	34.789	10.780

Date	Gnomon	Shadow	Angle
20 February	100 cm	107 cm	46.9°

20 february 2016 (Sfax-TUNISIA) Latitude: 34.789 °

21 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °



$$\text{circumference} = \frac{360^\circ \times 7389 \text{ km}}{46.9^\circ + 21.3^\circ} = 39004 \text{ km}$$



# Shenzhen, China

February 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Shenzhen	China	荔園小學南校區	22.549	114.092

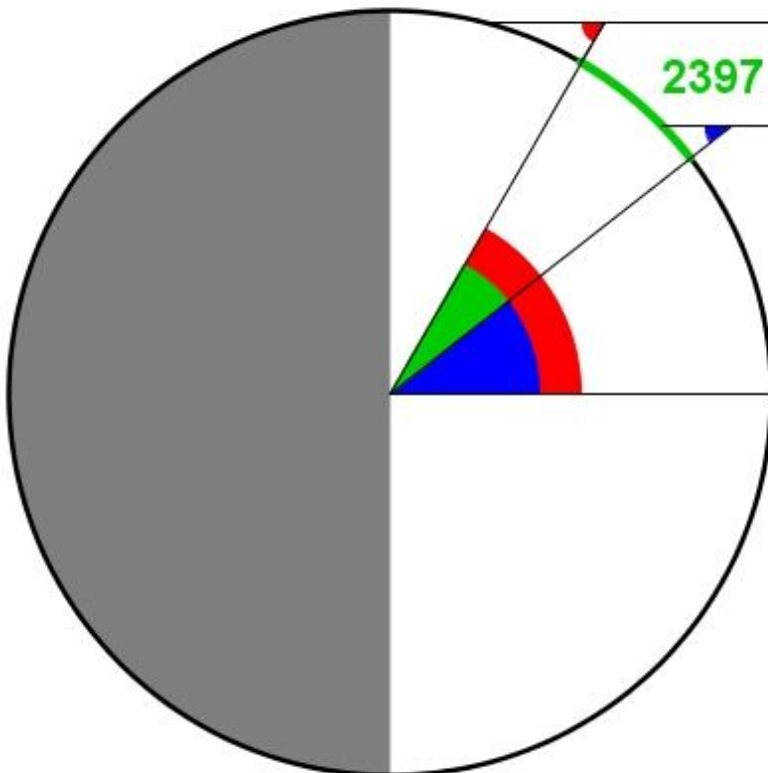
Date	Gnomon	Shadow	Angle
- February	- cm	- cm	-°

04 february 2016 (Lafrançaise-FRANCE) Latitude: 44.127°

04 february 2016 (Shenzhen-CHINA) Latitude: 22.549°

60.1° Lafrançaise

38.2° Shenzhen




$$\text{circumference} = \frac{360^\circ \times 2397 \text{ km}}{60.1^\circ - 38.2^\circ} = 39403 \text{ km}$$

# Tunis, Tunisia

February 2016

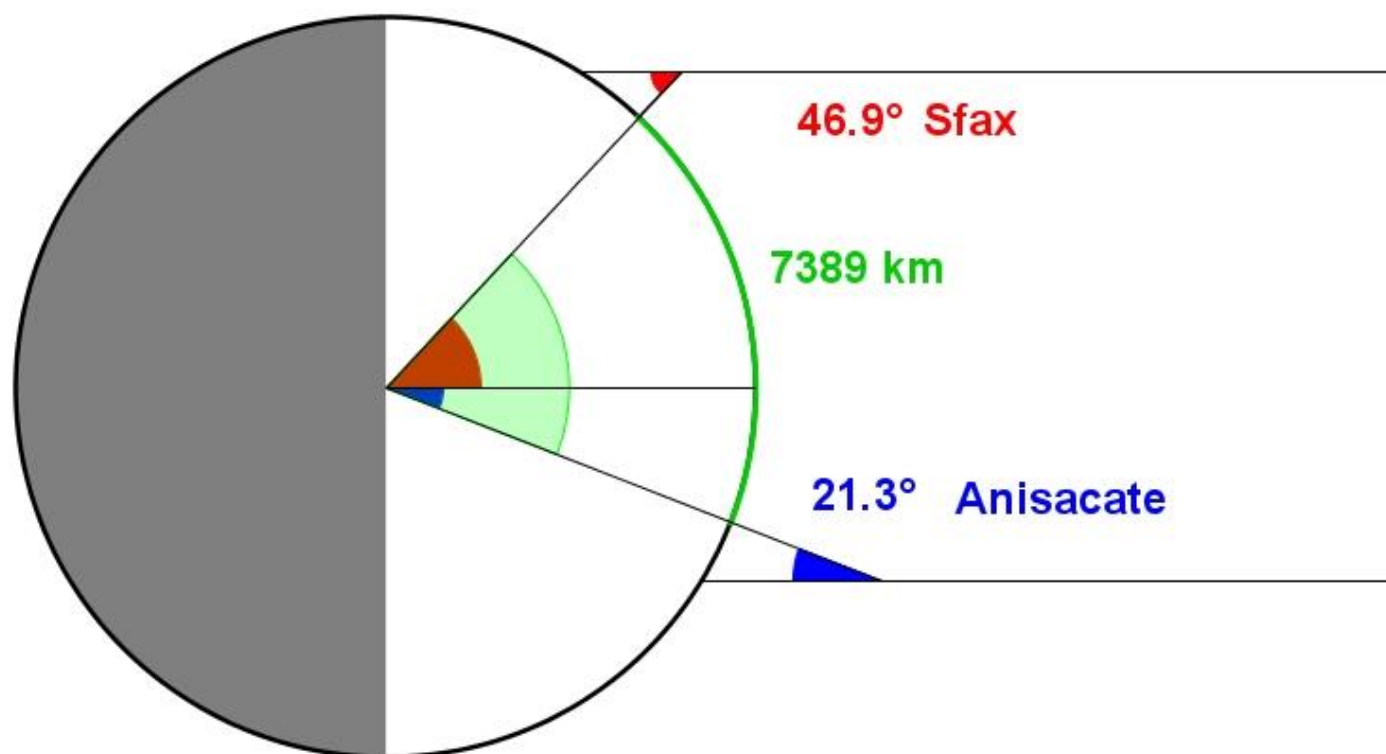


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Tunis	Tunisia	Ecole primaire 16 Rue de Russie	36.795	10.177

Date	Gnomon	Shadow	Angle
03 February	105 cm	205 cm	62.9°

20 february 2016 (Sfax-TUNISIA) Latitude: 34.789 °

21 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °




$$\text{circumference} = \frac{360^\circ \times 7389 \text{ km}}{46.9^\circ + 21.3^\circ} = 39004 \text{ km}$$

# Yamunanagar die&t, India

February 2016

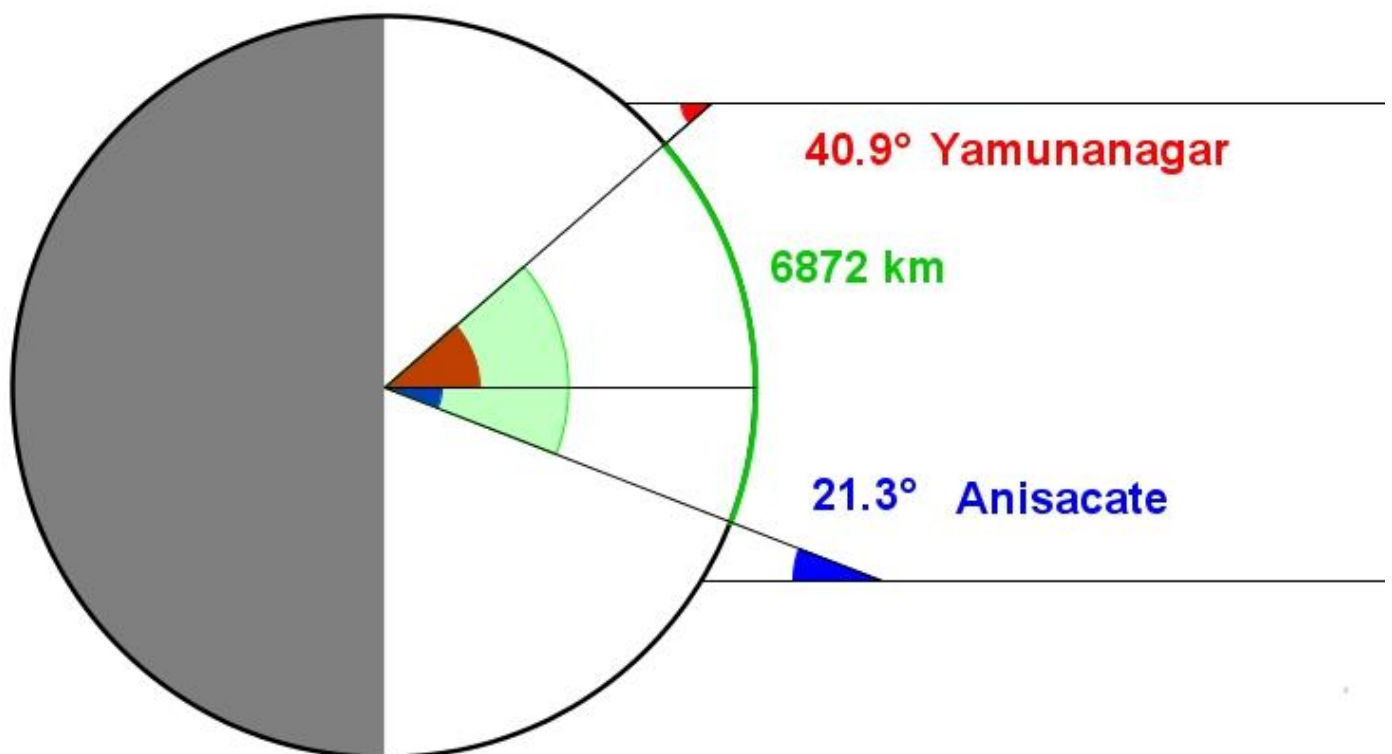


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Yamunanagar	India	DIE&T Tejli	30.134	77.310

Date	Gnomon	Shadow	Angle
20 February	37 cm	32 cm	40.9°

20 february 2016 (Yamunanagar-INDIA) Latitude: 30.134 °

21 february 2016 (Anisacate-ARGENTINA) Latitude: -31.717 °



$$\text{circumference} = \frac{360^\circ \times 6872 \text{ km}}{40.9^\circ + 21.3^\circ} = 39774 \text{ km}$$