

January



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

Date	Gnomon	Shadow	Angle
13 January 2020	49cm	82.5cm	59.3°

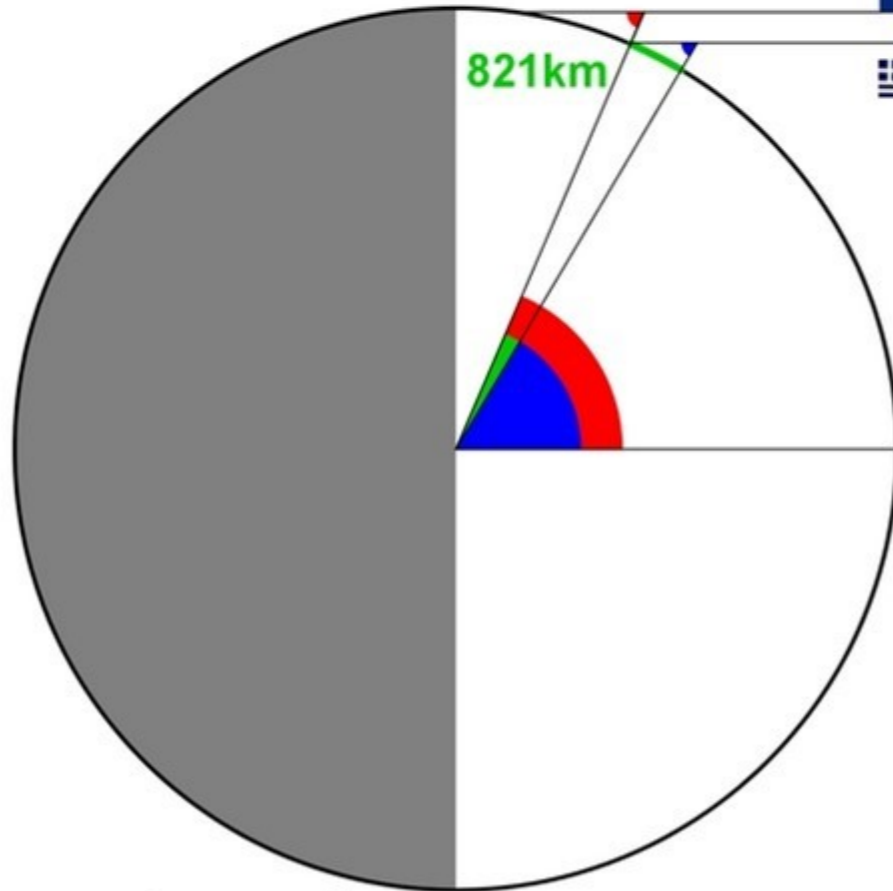


13/1/2020 (Busteni-Romania) Latitude: 45.416°

13/1/2020 (Athens-Greece) Latitude: 38.027°

66.7° Busteni

59.3° Athens

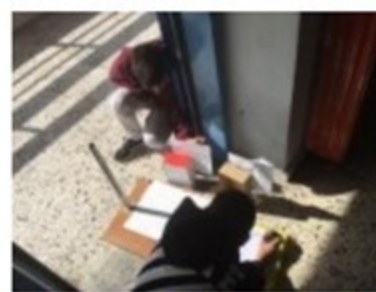


$$\text{circumference} = \frac{360^\circ \times 821\text{km}}{66.7^\circ - 59.3^\circ} = 39941 \text{ km}$$

Distance	Angle
circumference	360°
821km	66.7° - 59.3°



February



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

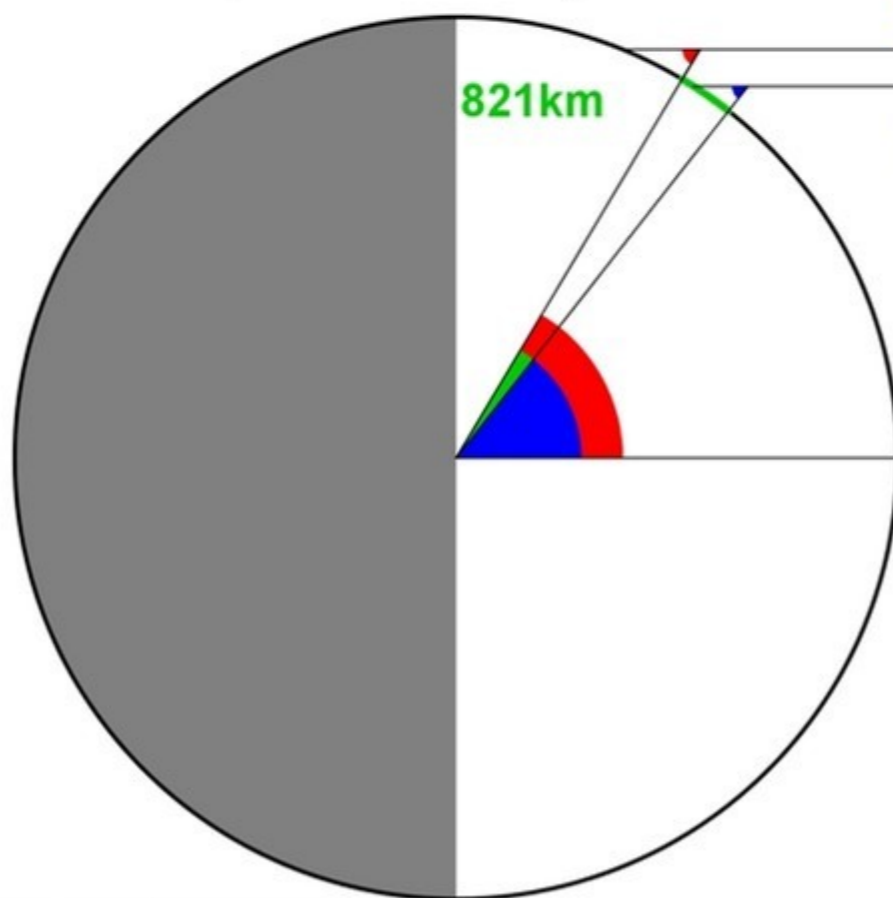
Date	Gnomon	Shadow	Angle
12 February 2020	49.0cm	62.5cm	51.9°

12/02/2020 (Busteni-Romania) Latitude: 45.416°

12/02/2020 (Athens-Greece) Latitude: 38.027°

59.2° Busteni

51.9° Athens



$$\text{circumference} = \frac{360^\circ \times 821\text{km}}{59.2^\circ - 51.9^\circ} = 40488 \text{ km}$$

Distance	Angle
circumference	360°
821km	59.2° - 51.9°



Athens, Greece

March

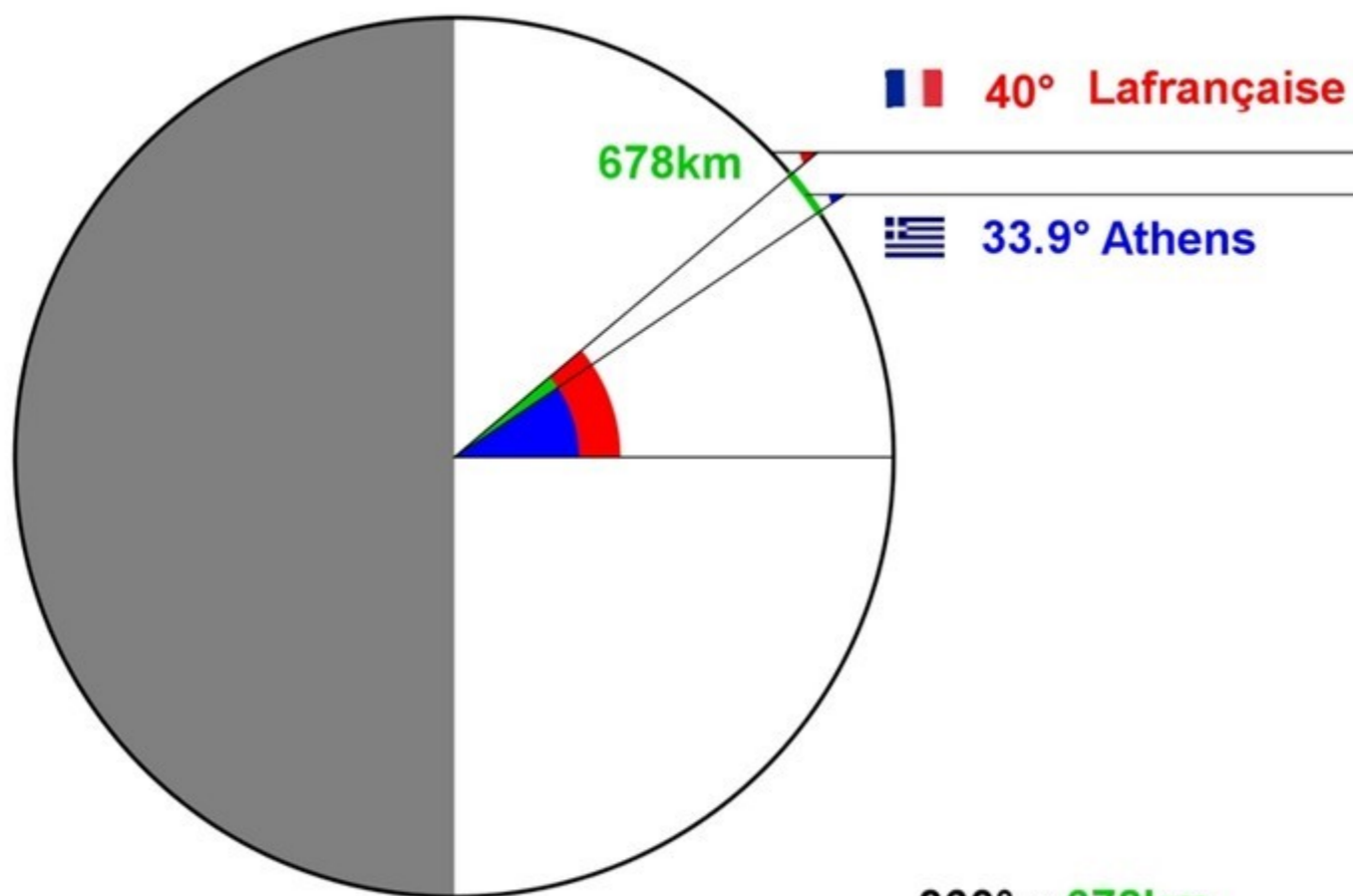


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
30 March 2020	30.5cm	20.5cm	33.9°
31 March 2020	44.5cm	29.5cm	33.5°

30/03/2020 (Lafrançaise-France) Latitude: 44.127°

30/03/2020 (Athens-Greece) Latitude: 38.027°



Distance	Angle
circumference	360°
678km	40° - 33.9°

$$\text{circumference} = \frac{360^\circ \times 678\text{km}}{40^\circ - 33.9^\circ} = 40013 \text{ km}$$



April

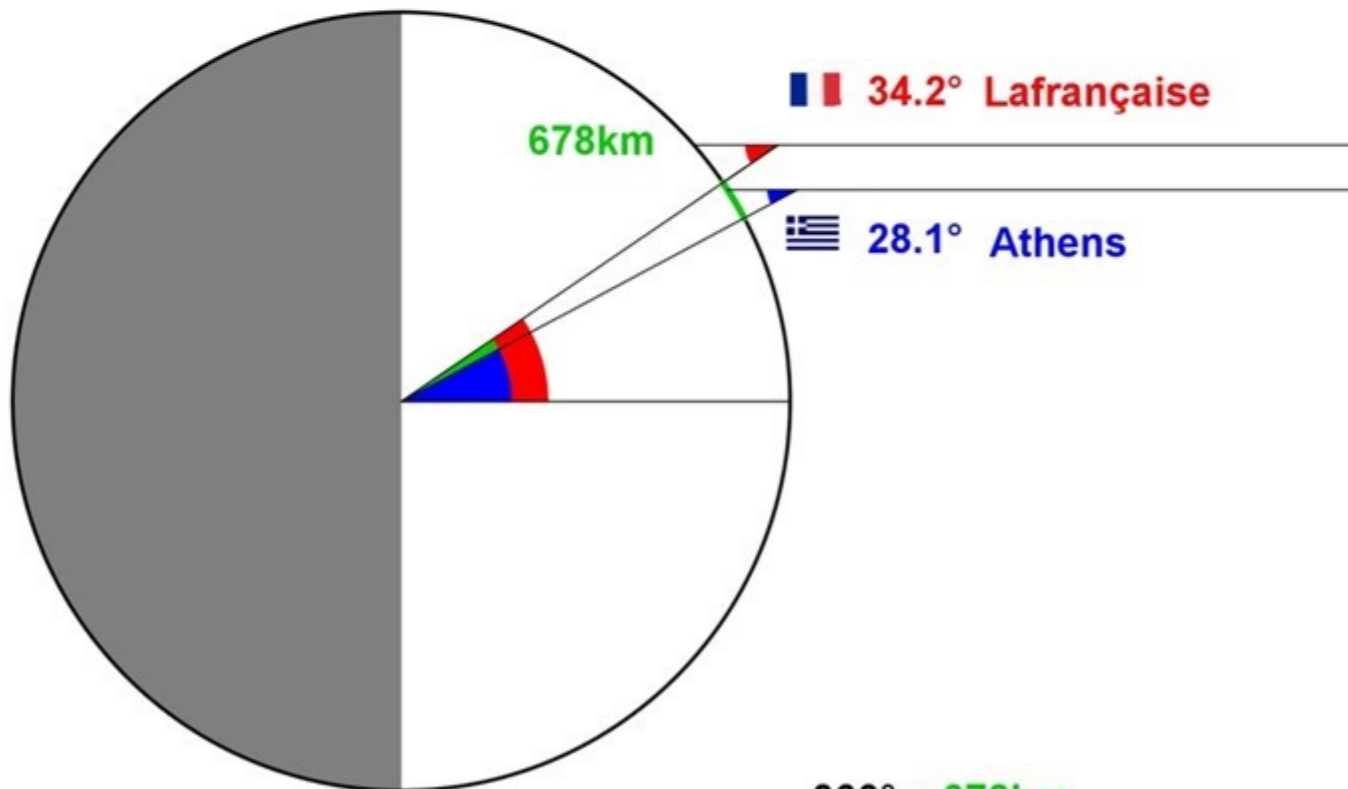


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
02 April 2020	30.5cm	18.3cm	31.0°
08 April 2020	26.0cm	15.0cm	30.0°
09 April 2020	31.0cm	17.0cm	28.7°
10 April 2020	38.0cm	21.6cm	29.6°
11 April 2020	38.0cm	21.5cm	29.5°
12 April 2020	38.0cm	21.0cm	28.9°
13 April 2020	38.0cm	20.6cm	28.5°
14 April 2020	45.0cm	24.0cm	28.1°
15 April 2020	50cm	26.2cm	27.7°
16 April 2020	31.0cm	16.0cm	27.3°
17 April 2020	50cm	25.5cm	27°
23 April 2020	31cm	14.5cm	25.1°
24 April 2020	50cm	23cm	24.7°
25 April 2020	50cm	22.6cm	24.3°
26 April 2020	50cm	22.3cm	24°
27 April 2020	50cm	22cm	23.7°
28 April 2020	31cm	13.5cm	23.5°
29 April 2020	50cm	21.4cm	23.2°
30 April 2020	21cm	8.5cm	22°

14/04/2020 (Lafrançaise-France) Latitude: 44.127°

14/04/2020 (Athens-Greece) Latitude: 38.028°



Distance	Angle
678km	360°
	34.2° - 28.1°

$$\text{circumference} = \frac{360^\circ \times 678\text{km}}{34.2^\circ - 28.1^\circ} = 40013 \text{ km}$$



May

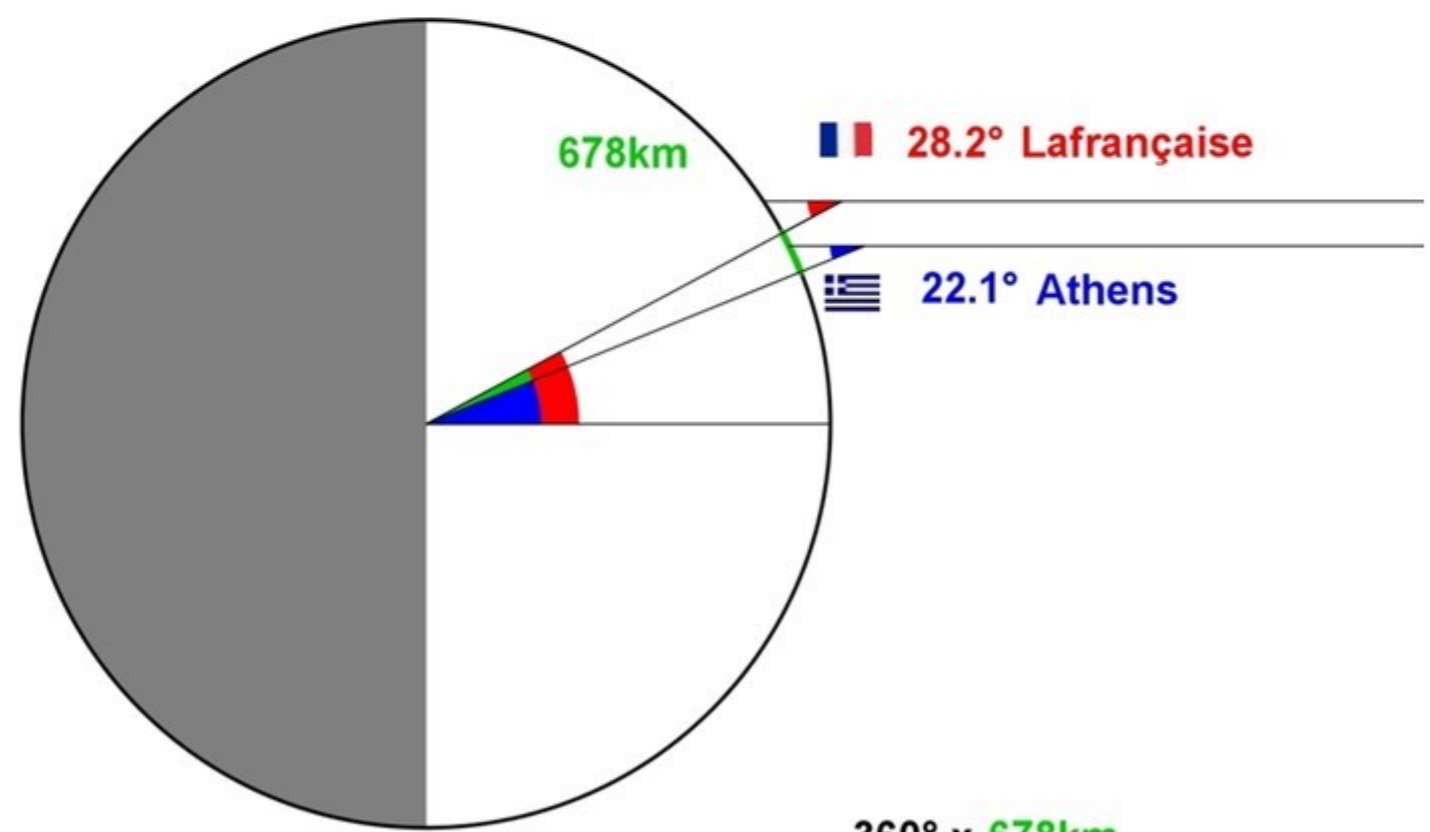


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
01 May 2020	50.0cm	20.6cm	22.4°
02 May 2020	50.0cm	20.3cm	22.1°
03 May 2020	50.0cm	20.1cm	21.9°
04 May 2020	30.0cm	11.3cm	20.6°
05 May 2020	50.0cm	19.5cm	21.3°
06 May 2020	39.3cm	15.2cm	21.1°
08 May 2020	50.0cm	18.6cm	20.4°
09 May 2020	50.0cm	18.4cm	20.2°
10 May 2020	50.0cm	18.1cm	19.9°
11 May 2020	50cm	17.8cm	19.6°
13 May 2020	50.0cm	17.4cm	19.2°
14 May 2020	19.0cm	6.6cm	19.2°
15 May 2020	40cm	13.6cm	18.8°
16 May 2020	40.0cm	13.5cm	18.6°
17 May 2020	40.0cm	13.2cm	18.3°
18 May 2020	248cm	81cm	18.1°

02/05/2020 (Lafrançaise-France) Latitude: 44.127°

02/05/2020 (Athens-Greece) Latitude: 38.027°



$$\text{circumference} = \frac{360^\circ \times 678\text{km}}{28.2^\circ - 22.1^\circ} = 40013 \text{ km}$$

Distance	Angle
678km	28.2° - 22.1°



July

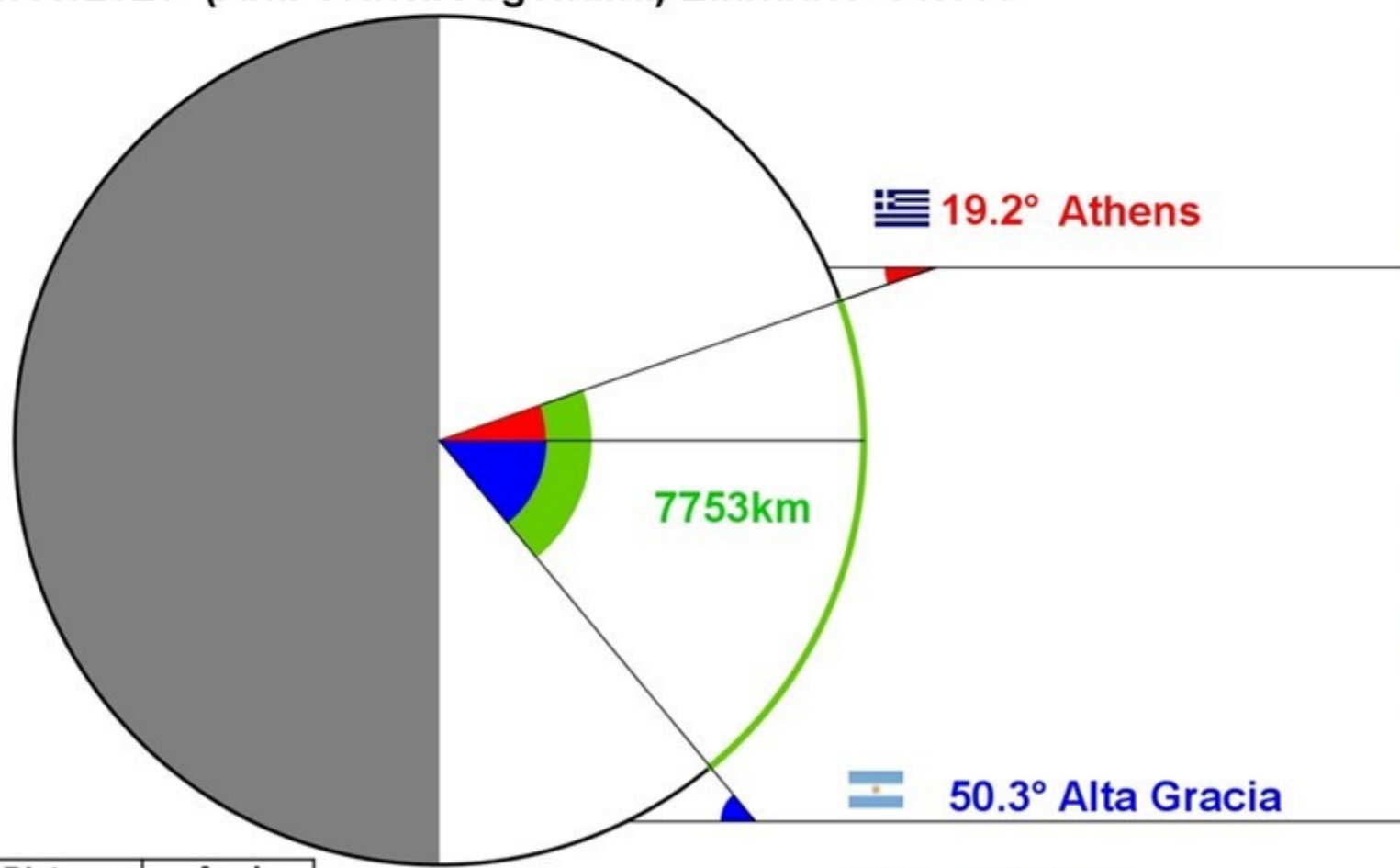


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Bill Kostopoulos	38.130	23.850

Date	Gnomon	Shadow	Angle
30 July 2020	20.1cm	7.0cm	19.2°

30/07/2020 (Athens-Greece) Latitude: 38.13°

30/07/2020 (Alta Gracia-Argentina) Latitude: -31.656°



circumference = $\frac{360^\circ \times 7753\text{km}}{19.2^\circ + 50.3^\circ} = 40159 \text{ km}$

Distance	Angle
circumference	360°
7753km	19.2°+50.3°



September

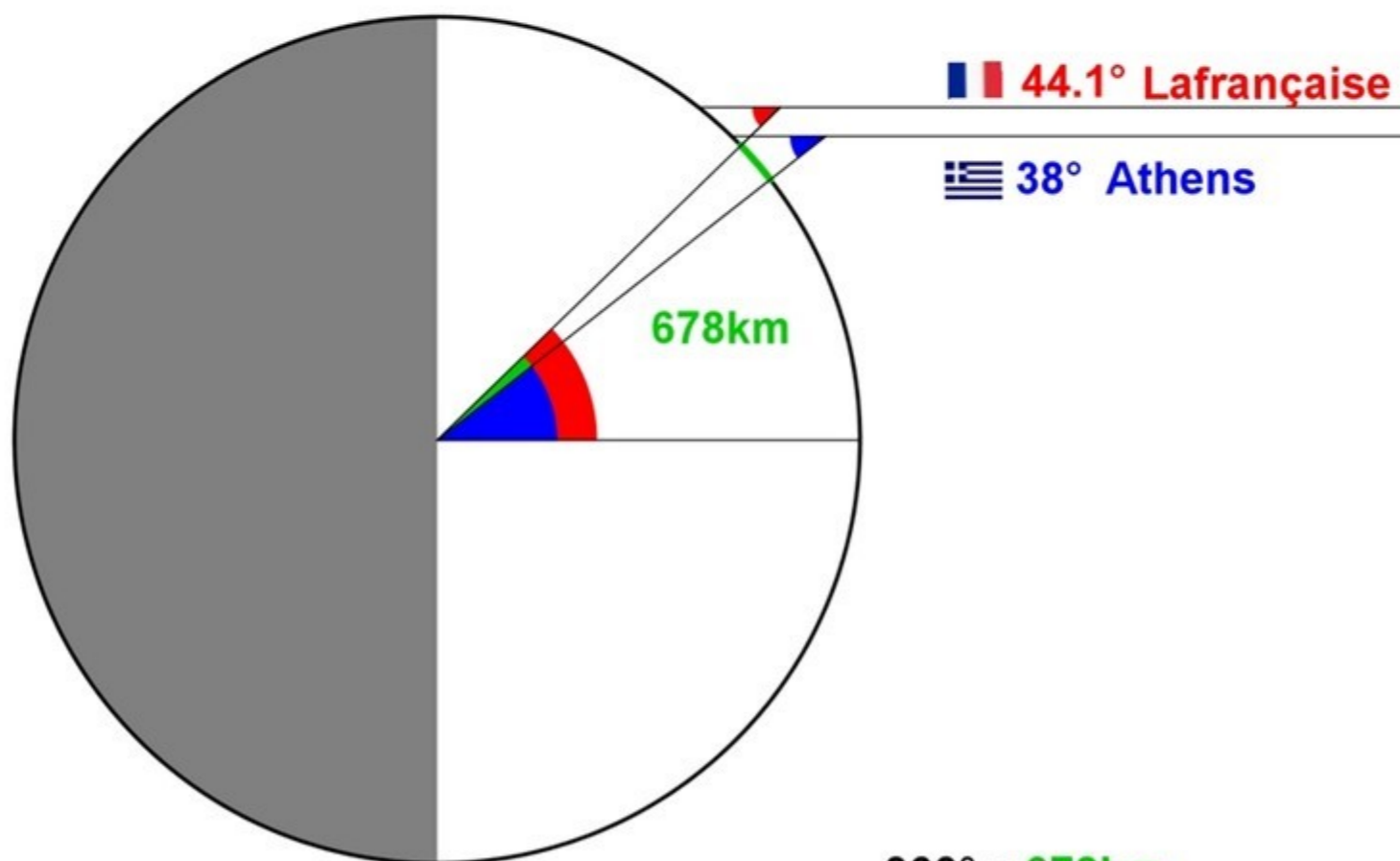


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental School Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
22 September 2020	247.0cm	193.0cm	38.0°

22/09/2020 (Lafrançaise-France) Latitude: 44.127°

22/09/2020 (Athens-Greece) Latitude: 38.027°



$$\text{circumference} = \frac{360^\circ \times 678\text{km}}{44.1^\circ - 38^\circ} = 40013 \text{ km}$$

Distance	Angle
circumference	360°
678km	44.1° - 38°

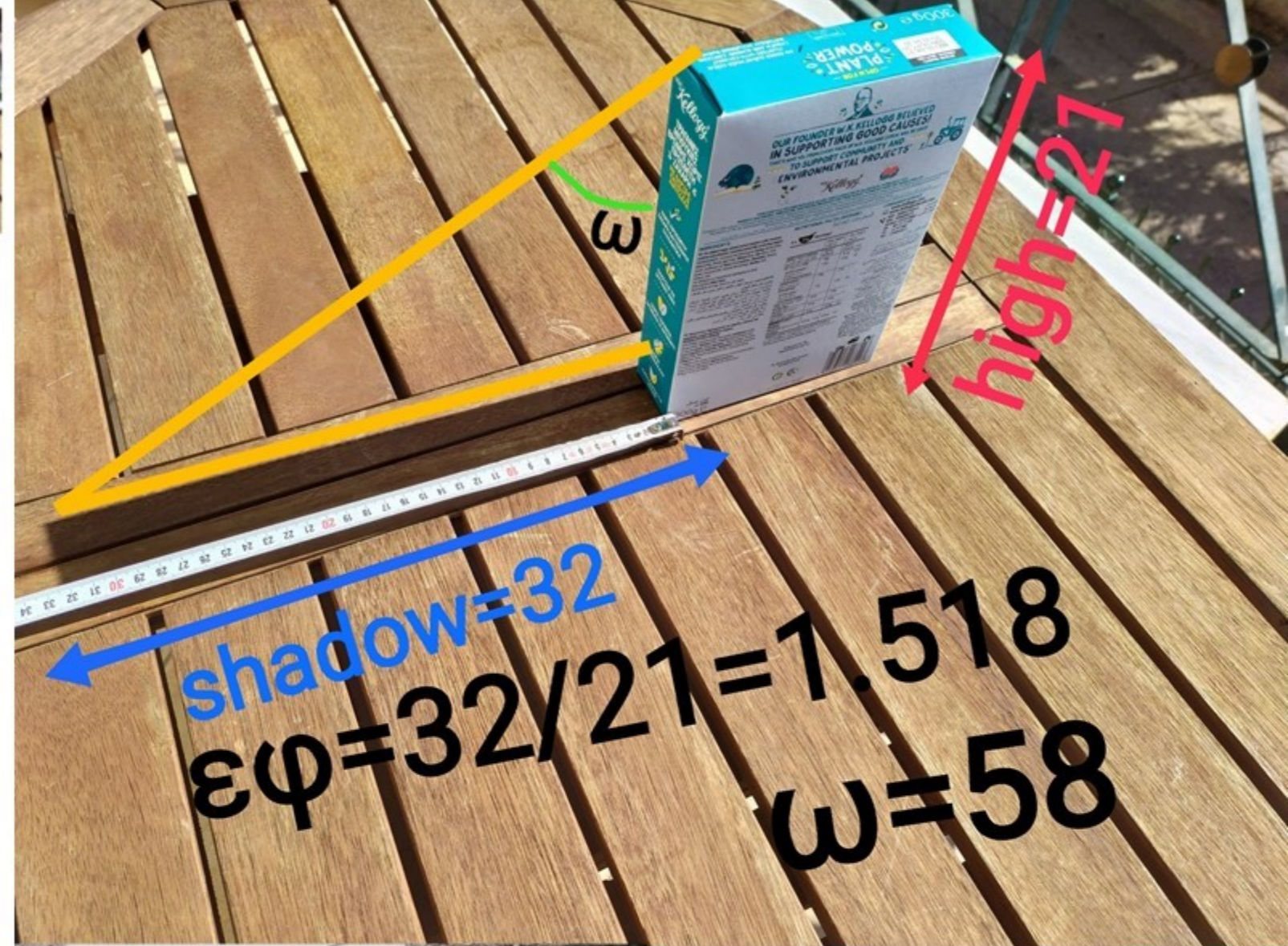


November



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

Date	Gnomon	Shadow	Angle
16 November 2020	14.5cm	22.5cm	57.2°
19 November 2020	21.0cm	32.5cm	57.1°
21 November 2020	21.0cm	34.0cm	58.3°
23 November 2020	37.0cm	59.0cm	57.9°
27 November 2020	19.0cm	32.0cm	59.3°
30 November 2020	20.1cm	34.5cm	58.9°

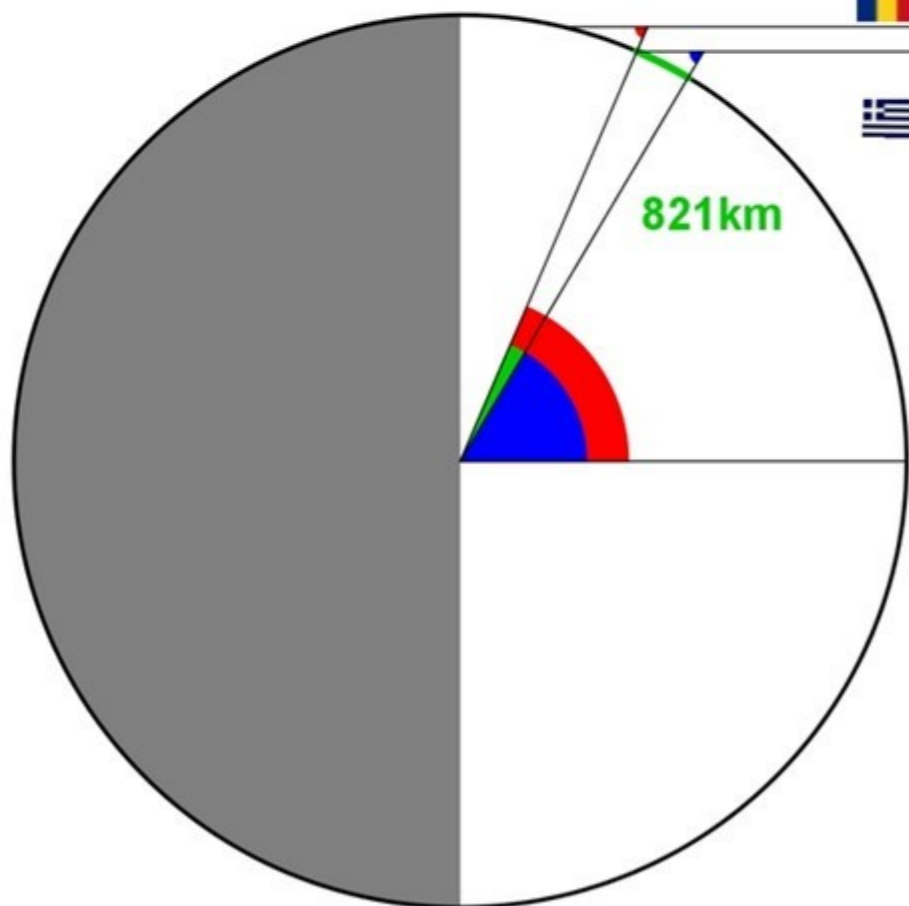


27/11/2020 (Busteni-Romania) Latitude: 45.416°

27/11/2020 (Athens-Greece) Latitude: 38.027°

66.7° Busteni

59.3° Athens

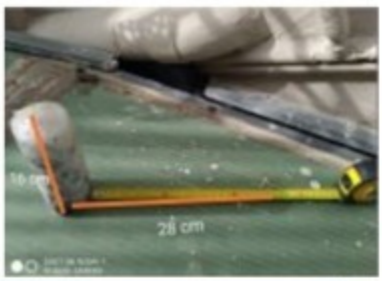


$$\text{circumference} = \frac{360^\circ \times 821\text{km}}{66.7^\circ - 59.3^\circ} = 39941 \text{ km}$$

Distance	Angle
circumference	360°
821km	66.7° - 59.3°



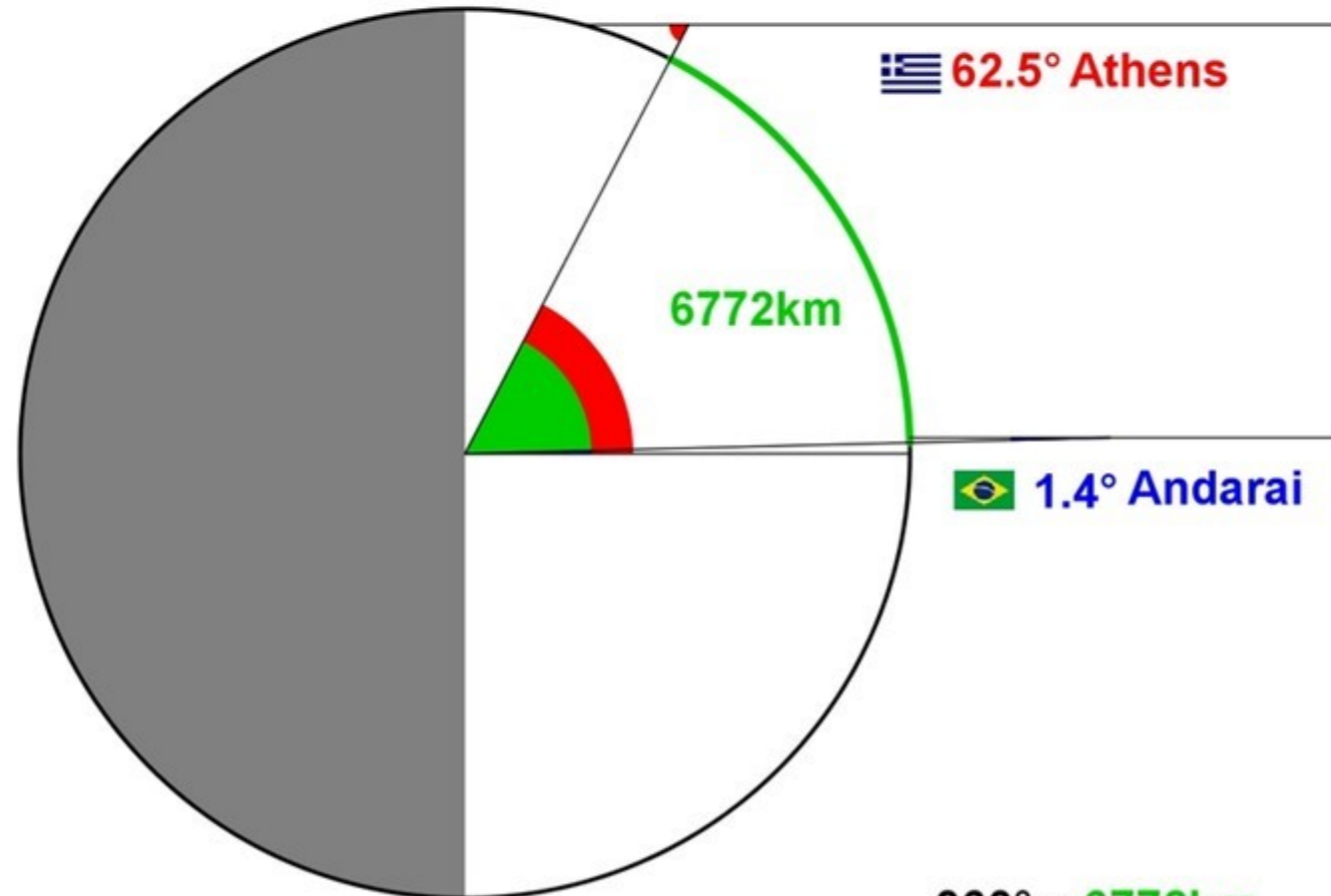
December



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

Date	Gnomon	Shadow	Angle
04 December 2020	28.0cm	52.0cm	61.7°
06 December 2020	27.0cm	49.0cm	61.1°
07 December 2020	28.0cm	52.0cm	61.7°
08 December 2020	20.6cm	36.8cm	60.8°
09 December 2020	24.5cm	46.5cm	62.2°
13 December 2020	48.0cm	88.0cm	61.4°
15 December 2020	21.0cm	38.0cm	61.1°
16 December 2020	28.0cm	54.0cm	62.6°
18 December 2020	16.0cm	28.0cm	60.3°
19 December 2020	25.0cm	45.5cm	61.2°
21 December 2020	28.0cm	53.7cm	62.5°

21/12/2020 (Athens-Greece) Latitude: 38.027°
 21/12/2020 (Andarai-Brazil) Latitude: -22.927°



$$\text{circumference} = \frac{360^\circ \times 6772\text{km}}{62.5^\circ - 1.4^\circ} = 39900 \text{ km}$$

Distance	Angle
circumference	360°
6772km	62.5° - 1.4°