

Fantasy Travel



Objectives

Students will identify various countries and cities from around the world.

Students will calculate the distance between various cities.

Student will identify indigenous species from various countries.

Materials

For each student pair or trio:

- copy of one country from the Tour Brochure Funsheets
- Library or Internet Access
- one atlas
- one calculator (optional)

For instructor

- copy of Teacher's Guide answer pages

Action

1. Divide the class into groups of two or three.
2. Explain that there are many fascinating places all around the world to visit. Although this activity only describes a few countries and cities to visit, there are many more. All countries have unique animals and attractions that can be a special part of your visit. This activity will enhance geography skills and perhaps pique your curiosity about future travel destinations!
3. Assign each group one of the eight countries in the set of Tour Brochure Funsheets (Germany, Indonesia, United States of America, South America, Australia, China, United States of America-Alaska, and South Africa).
4. Instruct students to research and calculate the following information to complete the travel brochure for their assigned country.

Label the three cities listed in the middle of the brochure on the map provided.

Identify three to five attractions for each city listed.

Identify five to ten animals native to the cities' surrounding areas.

Calculate the distance between all three cities using the equation listed on the Tour Brochure. The resulting answer will be in miles. Note: the equation listed on the travel brochure is accurate = $\pm 10\%$.

Answer the question on the bottom of the tour brochure using the answers from the above mentioned calculations.

5. Instruct students to present their country's Tour Brochure to the class. Students may choose to bring photographs or souvenirs from their designated country .



Tour Of South Africa



Johannesburg: 26° S & 28° E

Things To Do:

Cape Town: 33° S & 18° E

Things To Do:

Pretoria: 25° S & 28° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Cape Town & Johannesburg

Distance between Johannesburg & Pretoria

Distance between Pretoria & Cape Town

If you begin your tour in Cape Town, you should visit _____ next, since it is closer than _____.



Tour Of Alaska



Anchorage: 61° N & 150° W

Things To Do:

Fairbanks: 64° N & 147° W

Things To Do:

Kodiak: 57° N & 152° W

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Anchorage & Fairbanks

Distance between Fairbanks & Kodiak

Distance between Kodiak & Anchorage

If you begin your tour in Kodiak, you should visit _____ next, since it is closer than _____.



Tour Of Australia



Alice Springs: 23° S & 133° E

Things To Do:

Melbourne: 37° S & 144° E

Things To Do:

Adelaide: 34° S & 138° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Alice Springs & Adelaide

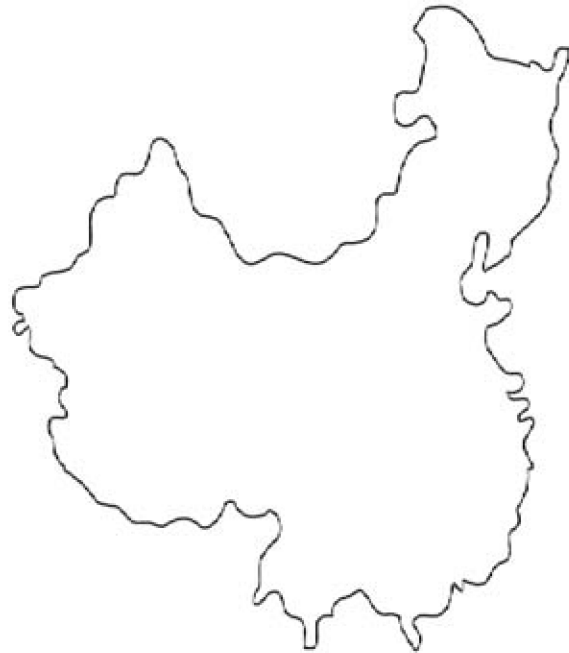
Distance between Adelaide & Melbourne

Distance between Melbourne & Alice Springs

If you begin your tour in Alice Springs, you should visit _____ next, since it is closer than _____.



Tour Of China



Beijing: 39° N & 116° E

Things To Do:

Shanghai: 31° N & 121° E

Things To Do:

Kunming: 25° N & 102° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Beijing & Shanghai

Distance between Shanghai & Kunming

Distance between Kunming & Beijing

If you begin your tour in Kunming, you should visit _____ next, since it is closer than _____.



Tour Of Germany



Berlin: 52° N & 13° E

Things To Do:

Hamburg: 53° N & 9° E

Things To Do:

Munich: 48° N & 11° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Berlin & Hamburg

Distance between Hamburg & Munich

Distance between Munich & Berlin

If you begin your tour in Berlin, you should visit _____ next, since it is closer than _____.



Tour Of Indonesia



Jakarta: 6° S & 106° E

Things To Do:

Surabaya: 7° S & 112° E

Things To Do:

Palembang: 3° S & 104° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Jakarta & Palembang

Distance between Palembang & Surabaya

Distance between Surabaya & Jakarta

If you begin your tour in Jakarta, you should visit _____ next, since it is closer than _____.



Tour Of

South America



Buenos Aires: 34° S & 58° W

Things To Do:

Brasilia: 15° S & 47° W

Things To Do:

Rio De Janeiro: 22° S & 43° W

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Rio De Janeiro & Brasilia

Distance between Brasilia & Buenos Aires

Distance between Buenos Aires &
Rio De Janeiro

If you begin your tour in Buenos Aires, you should visit _____ next, since it is closer than _____.



Tour Of United States Of America

Tampa: 27° N & 82° W

Things To Do:

Miami: 25° N & 80° W

Things To Do:

Cape Kennedy: 28° N & 80° W

Things To Do:

Please label the cities mentioned above on the map



Native Animals

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between San Francisco & Seattle

Distance between Seattle & San Diego

Distance between San Diego & San Francisco

If you begin your tour in Tampa, you should visit _____ next, since it is closer than _____.



Tour Of South Africa



Johannesburg: 26° S & 28° E

Things To Do:

1. Lesedi Cultural Village - Cultural Villages
2. Westville Heritage Trust - Historic Homes
3. Gold Reef City - Historic Mining Town
4. Conservation Tours - Birding
5. Carlton Panorama - Tallest Building in Africa

Cape Town: 33° S & 18° E

Things To Do:

1. Castle of Good Hope - Castle Tour
2. South African Museum & Planetarium
3. Cape of Good Hope Nature Reserve - Sightseeing
4. Table Mountain & Cableway - Scenic Horticulture
5. Victoria Alfred Waterfront - Bird Sanctuary &

Pretoria: 25° S & 28° E

Things To Do:

1. De Wildt Cheetah & Wildlife Centre - Endangered Species Research & Breeding Facility
2. African Window - Natural History Museum
3. Ndebele Village - Tribal Village
4. Cullinan Diamond Mine Tours
5. Transvaal Museum - Science Museum

Please label the cities mentioned above on the map

Native Animals

1. Giraffe
Giraffa camelopardalis
2. Cheetah
Crocuta crocuta
3. Eland
Taurotragus oryx
4. Grevy Zebra
Equus grevyi
5. Greater Kudu
Tragelaphus strepsiceros

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Cape Town & Johannesburg

$$\begin{aligned} \text{Distance}_{\text{Lat}} &= 69.1 \times (26^\circ - 33^\circ) \\ &= 69.1 \times (-7^\circ) = -483.7 \end{aligned}$$

$$\begin{aligned} \text{Distance}_{\text{Long}} &= 69.1 \times (28^\circ - 18^\circ) \times \cos(33^\circ / 57.3) \\ &= 69.1 \times (10^\circ) \times \cos(0.57591623) \\ &= 691 \times 0.999949482 = 690.97 \end{aligned}$$

$$\begin{aligned} \text{Distance} &= \sqrt{(-483.7)^2 + (690.97)^2} \\ &= \sqrt{(233965.69) + (474739.5409)} = 711405.2309 \\ &= \mathbf{843 \text{ miles}} \end{aligned}$$

Distance between Johannesburg & Pretoria

$$\begin{aligned} \text{Distance}_{\text{Lat}} &= 69.1 \times (25^\circ - 26^\circ) \\ &= 69.1 \times (-1^\circ) = -69.1 \end{aligned}$$

$$\begin{aligned} \text{Distance}_{\text{Long}} &= 69.1 \times (28^\circ - 28^\circ) \times \cos(26^\circ / 57.3) \\ &= 69.1 \times (0^\circ) \times \cos(0.453752181) \\ &= 0 \times 0.999968641 = 0 \end{aligned}$$

$$\begin{aligned} \text{Distance} &= \sqrt{(-69.1)^2 + (0)^2} \\ &= \sqrt{(4774.81) + (0)} = 4774.81 \\ &= \mathbf{69 \text{ miles}} \end{aligned}$$

Distance between Pretoria & Cape Town

$$\begin{aligned} \text{Distance}_{\text{Lat}} &= 69.1 \times (33^\circ - 25^\circ) \\ &= 69.1 \times (8^\circ) = 552.8 \end{aligned}$$

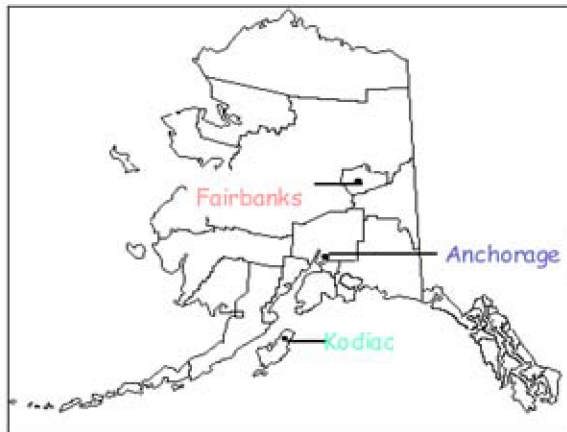
$$\begin{aligned} \text{Distance}_{\text{Long}} &= 69.1 \times (18^\circ - 28^\circ) \times \cos(25^\circ / 57.3) \\ &= 69.1 \times (10^\circ) \times \cos(0.436300174) \\ &= 691 \times 0.999971007 = 690.98 \end{aligned}$$

$$\begin{aligned} \text{Distance} &= \sqrt{(552.8)^2 + (690.98)^2} \\ &= \sqrt{(305587.84) + (474745.3604)} = 783041.2004 \\ &= \mathbf{884 \text{ miles}} \end{aligned}$$

If you begin your tour in Cape Town, you should visit Johannesburg next, since it is closer than Pretoria.



Tour Of Alaska



Anchorage: 61° N & 150° W

Things To Do:

1. Alaka Botanical Garden
2. Chugach State Park *Hiking*
3. Hillside Park *Wildlife Viewing*
4. Goose Lake *Cross Country Skiing*
5. Oscar Anderson House *Anchorage 1st Wood Framed House*

Fairbanks: 64° N & 147° W

Things To Do:

1. Alaska Bird Observatory
2. Alakaland Theme Park
3. El Dorado Gold Mine
4. Riverboat Discovery *Scenic Boat Trips*
5. University of Alaska Museum

Kodiak: 57° N & 152° W

Things To Do:

1. Dig A Bignak *Archaeological Dig*
2. Baranof Museum
3. Orion's Boards and Cords *Skiing*
4. Barometer Mountain *Hiking*

Please label the cities mentioned above on the map

Native Animals

1. Caribou
Rangifer tarandus
2. Muskox
Ovibos moschatus
3. Polar Bear
Ursus maritimus
4. Willow Ptarmigan
Lagopus lagopus
5. Killer Whale
Orcinus orca

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Anchorage & Fairbanks

$$\text{Distance}_{\text{Lat}} = 69.1 \times (64^\circ - 61^\circ)$$

$$69.1 \times (3^\circ) = 207.3$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (147^\circ - 150^\circ) \times \cos(61^\circ / 57.3)$$

$$69.1 \times (-3^\circ) \times \cos(1.064572426)$$

$$-207.3 \times 0.999827391 = -207.3$$

$$\text{Distance} = \sqrt{(207.3)^2 + (-207.3)^2}$$

$$(42973.29) + (42973.29) = 85946.58$$

293 miles

Distance between Fairbanks & Kodiak

$$\text{Distance}_{\text{Lat}} = 69.1 \times (57^\circ - 64^\circ)$$

$$69.1 \times (-7^\circ) = -483.7$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (152^\circ - 147^\circ) \times \cos(64^\circ / 57.3)$$

$$69.1 \times (5^\circ) \times \cos(1.116928447)$$

$$345.5 \times 0.999809996 = 345.4$$

$$\text{Distance} = \sqrt{(-483.7)^2 + (345.4)^2}$$

$$(233965.69) + (119301.16) = 353266.85$$

594 miles

Distance between Kodiak & Anchorage

$$\text{Distance}_{\text{Lat}} = 69.1 \times (61^\circ - 57^\circ)$$

$$69.1 \times (4^\circ) = 276.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (150^\circ - 152^\circ) \times \cos(57^\circ / 57.3)$$

$$69.1 \times (-2^\circ) \times \cos(0.994764397)$$

$$-138.2 \times 0.999849285 = -138.18$$

$$\text{Distance} = \sqrt{(276.4)^2 + (-138.18)^2}$$

$$(76396.96) + (19093.71) = 95490.67$$

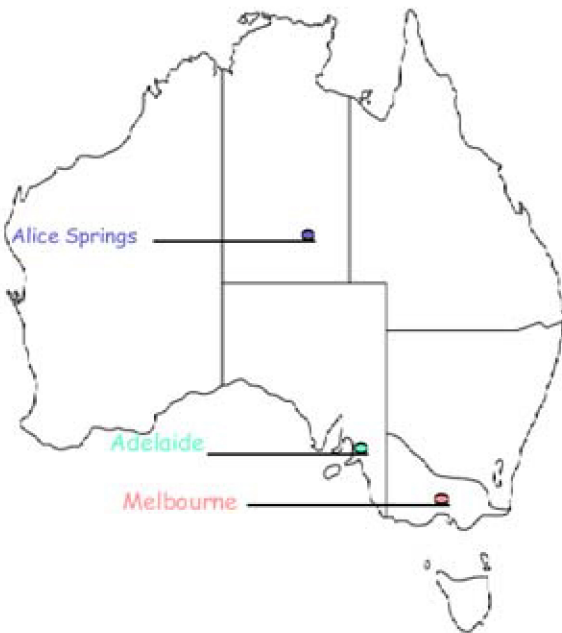
309 miles

If you begin your tour in Kodiak, you should visit Anchorage next, since it is closer than Fairbanks.



Tour Of

Australia



Alice Springs: 23° S & 133° E

Things To Do:

1. Larapinta Trail *Hiking*
2. Alice Springs Desert Park *Wildlife Park*
3. Alice Springs Reptile Centre *Nature Center*
4. Alice Springs Telegraph Station *Historical Reserve*

Melbourne: 37° S & 144° E

Things To Do:

1. Melbourne Zoo
2. Federation Square
3. Rialto Towers Observation Deck
4. Melbourne Aquarium
5. Melbourne Tank Museum

Adelaide: 34° S & 138° E

Things To Do:

1. Adelaide Zoo
2. Adelaide Symphony Orchestra *Symphony*
3. National Railway Museum Port Adelaide *Railroad Museum*
4. Tandanya Aboriginal Cultural Institute *Cultural Museum*
5. Botanic Gardens

Please label the cities mentioned above on the map

Native Animals

1. Cassowary
Casuaris casuaris
2. Koala
Phascolarctos cinereus
3. Western Gray Kangaroo
Macropus fuliginosus
4. Emu
Dromaius novaehollandiae
5. Great White Shark
Carcharodon carcharias

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Alice Springs & Adelaide

$$\text{Distance}_{\text{Lat}} = 69.1 \times (34^\circ - 23^\circ)$$

$$69.1 \times (11^\circ) = 760.1$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (138^\circ - 133^\circ) \times \cos(23^\circ/57.3)$$

$$69.1 \times (5^\circ) \times \cos(0.401)$$

$$345.5 \times 0.999975508 = 345.49$$

$$\text{Distance} = \sqrt{(760.1)^2 + (345.49)^2}$$

$$\sqrt{(577752.01) + (119363.3401)} = 697115.3501$$

$$835 \text{ miles}$$

Distance between Melbourne & Adelaide

$$\text{Distance}_{\text{Lat}} = 69.1 \times (37^\circ - 34^\circ)$$

$$69.1 \times (3^\circ) = 207.3$$

$$967.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (133^\circ - 144^\circ)$$

Distance between Melbourne & Alice Springs

$$\text{Distance}_{\text{Lat}} = 69.1 \times (23^\circ - 37^\circ)$$

$$69.1 \times (-14^\circ) = -967.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (133^\circ - 144^\circ) \times \cos(37^\circ/57.3)$$

$$69.1 \times (-11^\circ) \times \cos$$

$$(0.645724258)$$

$$-760.1 \times 0.999936494 = -760.1$$

$$\text{Distance} = \sqrt{(-967.4)^2 + (-760.1)^2}$$

$$\sqrt{(935862.76) + (577752.01)} = 1513614.77$$

$$1230 \text{ miles}$$

If you begin your tour in Alice Springs, you should visit Adelaide next, since it is closer than Melbourne.



Tour Of China



Beijing: 39° N & 116° E

Things To Do:

1. Forbidden City
Administration Site of the Ming & Qing Dynasties
2. Great Wall
Historic Site
3. Summer Palace
Imperial Garden
4. Tian'anmen Square
Historic Site
5. Grand View Garden
Garden

Shanghai: 31° N & 121° E

Things To Do:

1. Shanghai Museum
Museum
2. Bund
Waterfront Boulevard
3. Huangpu River Trip
Boat Trip
4. Huzhou Pagoda
Leaning Tower of China
5. Sun Yat-sen
Former Residence of the Chinese Republic Founder

Kunming: 25° N & 102° E

Things To Do:

1. Black Dragon Pool
Site of Ming Dynasty Temple
2. Dianchi Lake
Highland Lake
3. Stone Forest
Limestone Forest Formations
4. Jiuxiang Scenic Spot
Limestone Caverns
5. West Mountain
Nature Preserve

Please label the cities mentioned above on the map

Native Animals

1. Siberian Tiger
Panthera tigris altaica
2. Panda
Ailuropoda melanoleuca
3. Asian Elephant
Elephas maximus
4. Asian One Horned Rhinoceros
Rhinoceros unicornis
5. Chinese Alligator
Alligator sinensis

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Beijing & Shanghai

$$\text{Distance}_{\text{Lat}} = 69.1 \times (31^\circ - 39^\circ)$$

$$69.1 \times (-8^\circ) = -552.8$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (121^\circ - 116^\circ) \times \cos(39^\circ/57.3)$$

$$69.1 \times (5^\circ) \times \cos(0.680628272)$$

$$345.5 \times 0.999929443 = 345.48$$

$$\text{Distance} = \sqrt{(-552.8)^2 + (345.48)^2}$$

$$(305587.84) + (119356.4304) = 424944.2704$$

651 miles

Distance between Shanghai & Kunming

$$\text{Distance}_{\text{Lat}} = 69.1 \times (25^\circ - 31^\circ)$$

$$69.1 \times (-6^\circ) = -414.6$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (102^\circ - 121^\circ) \times \cos(31^\circ/57.3)$$

$$69.1 \times (-19^\circ) \times \cos$$

$$(0.541012216)$$

$$-1312.9 \times 0.99995542 = -1312.84$$

$$\text{Distance} = \sqrt{(-414.6)^2 + (-1312.84)^2}$$

$$(171893.16) + (1723548.866) = 1895442.026$$

1377 miles

Distance between Kunming & Beijing

$$\text{Distance}_{\text{Lat}} = 69.1 \times (39^\circ - 25^\circ)$$

$$69.1 \times (14^\circ) = 967.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (116^\circ - 102^\circ) \times \cos(25^\circ/57.3)$$

$$69.1 \times (14^\circ) \times \cos$$

$$(0.436300174)$$

$$967.4 \times 0.999971007 = 967.37$$

$$\text{Distance} = \sqrt{(967.4)^2 + (967.37)^2}$$

$$(935862.76) + (935804.7169) = 1871667.477$$

1368 miles

If you begin your tour in Kunming, you should visit Shanghai next, since it is closer than Beijing.



Tour Of

Germany



Berlin: 52°

Things To Do:

1. Reichstag
Parliament Building
2. Brandenburger Tor
Monument
3. Tacheles
Art Gallery
4. Komische Oper
Opera House
5. Märkisches Museum
Art and Musical Instrument Museum

Hamburg:

Things To Do:

1. Agna Zittsbahn
Theatre
2. Tierpark Carl Hagenbeck
Zoo
3. Amburger Kunsthalle
Art Museum
4. Altonaer Museum
History Museum
5. Altonaer Rathaus
Historic Site

Munich: 48° N & 11° E

Things To Do:

1. Tierpark Hellabrunn *Wildlife Park*
2. Alter Hof *Medieval Castle and Royal Residence*
3. Botanischer Garten *Botanical Gardens*
4. Altes Rathaus *Old Town Hall*
5. Alte Pina Kotheek *Art Gallery*

Please label the cities mentioned above on the map

Native Animals

1. Bechstein's Bat
Myotis bechsteini
2. European Squirrel
Spermophilus citellus
3. Garden Dormouse
Eliomys quercinus
4. Eurasian Otter
Lutra lutra
5. Pond Bat
Myotis dasycneme

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Berlin & Hamburg

$$\text{Distance}_{\text{Lat}} = 69.1 \times (53^\circ - 52^\circ)$$

$$69.1 \times (1^\circ) = 69.1$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (9^\circ - 13^\circ) \times \cos(52^\circ/57.3)$$

$$69.1 \times (-4^\circ) \times \cos(0.907504363)$$

$$-276.4 \times 0.999874566 = -276.37$$

$$\text{Distance} = (69.1)^2 + (-276.37)^2$$

$$(4774.81) + (76380.3769) = 81155.1869$$

284 miles

Distance between Hamburg & Munich

$$\text{Distance}_{\text{Lat}} = 69.1 \times (48^\circ - 53^\circ)$$

$$69.1 \times (-5^\circ) = -345.5$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (11^\circ - 9^\circ) \times \cos(53^\circ/57.3)$$

$$69.1 \times (2^\circ) \times \cos(0.92495637)$$

$$138.2 \times 0.999869696 = 138.18$$

$$\text{Distance} = (138.18)^2 + (-345.5)^2$$

$$(19093.7124) + (119370.25) = 138463.9624$$

372 miles

Distance between Munich & Berlin

$$\text{Distance}_{\text{Lat}} = 69.1 \times (52^\circ - 48^\circ)$$

$$69.1 \times (4^\circ) = 276.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (13^\circ - 11^\circ) \times \cos(48^\circ/57.3)$$

$$69.1 \times (2^\circ) \times \cos(0.837696335)$$

$$138.2 \times 0.999893121 = 138.19$$

$$\text{Distance} = (276.4)^2 + (138.19)^2$$

$$(76396.96) + (19096.4761) = 95493.4361$$

309 miles

If you begin your tour in Berlin, you should visit Hamburg next, since it is closer than Munich.



Tour Of Indonesia



Jakarta: 6° S & 106° E

Things To Do:

1. Old Batavia
Historic Site
2. Jakarta Museum
History Museum
3. National Monument
Historic Monument
4. Sunda Kelapa
Old Dutch Port
5. Taman Ismail Marzuki
Site of Western & Indonesian Performances

Surabaya: 7° S & 112° E

Things To Do:

1. Kali Mas *Ship Viewing & Wharf*
2. Kayun Flower Market
3. Mpu Tantular *Archaeological museum*

Palembang: 3° S & 104° E

Things To Do:

1. Negeri Sum-Sel *Museum*
2. Rubber and Coffee Plantations
3. Benteng *Historic Fort*
4. Ampera Bridge *Ship Viewing*
5. Floating Markets *Shopping*

Please label the cities mentioned above on the map

Native Animals

1. Sumatran Rhinoceros
Dicerorhinus sumatrensis
2. Orangutan
Pongo pygmaeus
3. Malayan Sun Bear
Helarctos malayanus
4. Asian Small Clawed Otter
Amblonyx cinereus
5. Sumatran Tiger
Panthera tigris sumatrae

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Jakarta & Palembang

$$\text{Distance}_{\text{Lat}} = 69.1 \times (3^\circ - 6^\circ)$$

$$69.1 \times (-3^\circ) = -207.3$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (104^\circ - 106^\circ) \times \cos(6^\circ/57.3)$$

$$69.1 \times (-2^\circ) \times \cos(0.104712041)$$

$$-138.2 \times 0.99999833 = -138.20$$

$$\text{Distance} = (-207.3)^2 + (-138.20)^2$$

$$(42973.29) + (19099.24) = 62072.53$$

249 miles

Distance between Palembang & Surabaya

$$\text{Distance}_{\text{Lat}} = 69.1 \times (7^\circ - 3^\circ)$$

$$69.1 \times (4^\circ) = 276.4$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (112^\circ - 104^\circ) \times \cos(3^\circ/57.3)$$

$$69.1 \times (8^\circ) \times \cos(0.05235602)$$

$$552.8 \times 0.99999582 = 552.80$$

$$\text{Distance} = (276.4)^2 + (552.80)^2$$

$$(76396.96) + (305587.84) = 381984.8$$

618 miles

Distance between Surabaya & Jakarta

$$\text{Distance}_{\text{Lat}} = 69.1 \times (6^\circ - 7^\circ)$$

$$69.1 \times (-1^\circ) = -69.1$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (106^\circ - 112^\circ) \times \cos(7^\circ/57.3)$$

$$69.1 \times (-6^\circ) \times \cos(0.122164048)$$

$$-414.6 \times 0.999997726 = -414.60$$

$$\text{Distance} = (-69.1)^2 + (-414.60)^2$$

$$(4774.81) + (171893.16) = 176667.97$$

420 miles

If you begin your tour in Jakarta, you should visit Palembang next, since it is closer than Surabaya.



Tour Of South America



Buenos Aires: 34° S & 58° W

Things To Do:

1. Casa Rosada *Presidential Palace*
2. Teatro Colon *Theatre*
3. Cabildo *Government Building*
4. Museo Historico Nacional *Museum*

Brasilia: 15° S & 47° W

Things To Do:

1. TV Tower *Scenic Tower*
2. Parque Nacional de Brasilia *Ecological Reserve*

Rio De Janeiro: 22° S & 43° W

Things To Do:

1. Sugar Loaf *Scenic Peek*
2. Tijuca Forest *Atlantic Rainforest*
3. Copacabana Beach
4. Maracana *Soccer Stadium*
5. Forte de Copacabana *Historic Fort*

Please label the cities mentioned above on the map

Native Animals

1. Prehensile Tailed Porcupine
Coendou prehensilis
2. Hoffman's Sloth
Choloepus hoffmanni
3. Howler Monkey
Alouatta caraya
4. Red-lored Amazon Parrot
Amazona autumnalis autumnalis
5. Green Iguana
Iguana iguana

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Rio De Janeiro & Brasilia

$$\text{Distance}_{\text{Lat}} = 69.1 \times (15^\circ - 22^\circ)$$

$$69.1 \times (-7^\circ) = -483.7$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (47^\circ - 43^\circ) \times \cos(22^\circ / 57.3)$$

$$69.1 \times (4^\circ) \times \cos(0.383944153)$$

$$276.4 \times 0.999977547 = 276.39$$

$$\text{Distance} = \sqrt{(-483.7)^2 + (276.39)^2}$$

$$\sqrt{(233965.69) + (76391.4321)} = 310357.1221$$

557 miles

Distance between Brasilia & Buenos Aires

$$\text{Distance}_{\text{Lat}} = 69.1 \times (34^\circ - 15^\circ)$$

$$69.1 \times (19^\circ) = 1312.9$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (58^\circ - 47^\circ) \times \cos(15^\circ / 57.3)$$

$$69.1 \times (11^\circ) \times \cos$$

$$(0.261780104)$$

$$760.1 \times 0.999989562 = 760.1$$

$$\text{Distance} = \sqrt{(1312.9)^2 + (760.1)^2}$$

$$\sqrt{(1723706.41) + (577752.01)} = 2301458.42$$

1517 miles

Distance between Buenos Aires & Rio De Janeiro

$$\text{Distance}_{\text{Lat}} = 69.1 \times (22^\circ - 34^\circ)$$

$$69.1 \times (12^\circ) = 829.2$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (43^\circ - 58^\circ) \times \cos(34^\circ / 57.3)$$

$$69.1 \times (-15^\circ) \times \cos$$

$$(0.593368237)$$

$$-1036.5 \times 0.999946374 = -1036.4$$

$$\text{Distance} = \sqrt{(829.2)^2 + (-1036.4)^2}$$

$$\sqrt{(687572.64) + (1074124.96)} = 1761697.6$$

1327 miles

If you begin your tour in Buenos Aires, you should visit Rio De Janeiro next, since it is closer than Brasilia.



Tour Of United States Of America



Tampa: 27° N & 82° W

Things To Do:

1. Busch Gardens *Theme Park*
2. Tampa Bay Performing Arts Center *Theatre*
3. Bayshore Boulevard *Walking*
4. Tampa Art Museum
5. Florida Aquarium

Miami: 25° N & 80° W

Things To Do:

1. South Beach
2. Miami Seaquarium
3. Metrozoo
4. Everglades Safari Park *Conservation Tour*
5. Pelican Harbor Seabird Station *Rehabilitation*

Cape Kennedy: 28° N & 80° W

Things To Do:

1. Kennedy Space Center
2. LC39 Observation Gantry *Observation Deck*
3. Rocket Garden *Museum*
4. Kennedy Space Center Launch Complex

Please label the cities mentioned above on the map

Native Animals

1. American Alligator
Alligator mississippiensis
2. Roseate Spoonbill
Ajaia ajaia
3. Florida Panther
Puma concolor coryi
4. Wood Stork
Mycteria Americana
5. Black Bear
Ursus americanus floridanus

Distances

Formula

$$\text{Distance}_{\text{Lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{\text{Latitude}})^2 + (\text{Distance}_{\text{Longitude}})^2}$$

Distance between Tampa & Miami

$$\text{Distance}_{\text{Lat}} = 69.1 \times (25^\circ - 27^\circ) = 69.1 \times (-2^\circ) = -138.2$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (80^\circ - 82^\circ) \times \cos(27^\circ/57.3) = 69.1 \times (-2^\circ) \times \cos(0.471204188) = -138.2 \times 0.999966182 = -138.2$$

$$\text{Distance} = \sqrt{(-138.2)^2 + (-138.2)^2} = \sqrt{(19099.24) + (19099.24)} = 381.98.48$$

195 miles

Distance between Miami & Cape Kennedy

$$\text{Distance}_{\text{Lat}} = 69.1 \times (28^\circ - 25^\circ) = 69.1 \times (3^\circ) = 207.3$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (80^\circ - 80^\circ) \times \cos(25^\circ/57.3)$$

$$\text{Distance}_{\text{Lat}} = 69.1 \times (27^\circ - 28^\circ) = 69.1 \times (-1^\circ) = -69.1$$

Distance between Cape Kennedy & Tampa

$$\text{Distance}_{\text{Lat}} = 69.1 \times (27^\circ - 28^\circ) = 69.1 \times (-1^\circ) = -69.1$$

$$\text{Distance}_{\text{Long}} = 69.1 \times (82^\circ - 80^\circ) \times \cos(28^\circ/57.3) = 69.1 \times (2^\circ) \times \cos(0.488656195) = 138.2 \times 0.999963631 = 138.19$$

$$\text{Distance} = \sqrt{(-69.1)^2 + (138.19)^2} = \sqrt{(4774.81) + (19096.4761)} = 23871.2861$$

154 miles

If you begin your tour in Tampa, you should visit Cape Kennedy next, since it is closer than Miami.