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 = ±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.
# Fantasy Travel

## Tour Of South Africa

<table>
<thead>
<tr>
<th>City</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johannesburg</td>
<td>26° S</td>
<td>28° E</td>
</tr>
<tr>
<td>Cape Town</td>
<td>33° S</td>
<td>18° E</td>
</tr>
<tr>
<td>Pretoria</td>
<td>25° S</td>
<td>28° E</td>
</tr>
</tbody>
</table>

### Things To Do:

- [ ]

### Native Animals

- [ ]

### Distances

**Formula**

- Distance \(_{lat}\) = 69.1 \times (Lat_2 - Lat_1)
- Distance \(_{long}\) = 69.1 \times (Long_2 - Long_1) \times \cos(\text{Lat}_1 / 57.3)

\[
\text{Distance} = \sqrt{(\text{Distance Lat})^2 + (\text{Distance Long})^2}
\]

**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
- **Latitude**: 61° N
- **Longitude**: 150° W

**Things To Do:**

## Fairbanks
- **Latitude**: 64° N
- **Longitude**: 147° W

**Things To Do:**

## Kodiak
- **Latitude**: 57° N
- **Longitude**: 152° W

**Things To Do:**

Please label the cities mentioned above on the map.

### Native Animals

<table>
<thead>
<tr>
<th>Distance</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distance Lat</strong> = 69.1 \times (Lat_2 - Lat_1)</td>
<td></td>
</tr>
<tr>
<td><strong>Distance Long</strong> = 69.1 \times (Long_2 - Long_1) \times \cos(Lat_1 / 57.3)</td>
<td></td>
</tr>
<tr>
<td>Distance = \sqrt{(Distance \ Lat)^2 + (Distance \ Long)^2}</td>
<td></td>
</tr>
</tbody>
</table>

#### 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 ______________.
Fantasy Travel

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

Distance_Lat = 69.1 x (Lat2 - Lat1)
Distance_Long = 69.1 x (Long2 - Long1) x cos(Lat1 / 57.3)

Distance = \sqrt{(Distance_Latitude)^2 + (Distance_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 _____________.

SeaWorld.com
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
Distance_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)
Distance_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)

Distance = \sqrt{(Distance_{Latitude})^2 + (Distance_{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 _______________.
Fantasy Travel

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
Distance_{Lat} = 69.1 \times (Lat_2 - Lat_1)
Distance_{Long} = 69.1 \times (Long_2 - Long_1) \times \cos(Lat_1 / 57.3)

Distance = \sqrt{(Distance_{Lat})^2 + (Distance_{Long})^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:**

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### Native Animals

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### Distances

**Formula**

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

\[
\text{Distance} = \sqrt{(\text{Distance}_{\text{Lat}})^2 + (\text{Distance}_{\text{Long}})^2}
\]

**Distance between Jakarta & Palembang**

**Distance between Palembang & Surabaya**

**Distance between Surabaya & Jakarta**

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If you begin your tour in Jakarta, you should visit ______________ next, since it is closer than ______________.
**Fantasy Travel**

**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 ________________.
Fantasy Travel

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
Distance $Lat = 69.1 \times (Lat_2 - Lat_1)$
Distance $Long = 69.1 \times (Long_2 - Long_1) \times \cos(Lat_1 / 57.3)$

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

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 ____________.
Fantasy Travel

Tour Of South Africa

Johannesburg: 26° S & 28° E

Things To Do:
1. Lesedi Cultural Village: Cultural Villages
2. Wintvillle Heritage Trust: Historic Homes
3. Gold Reef City: Historic Mining Town
4. Conservation Tours; Biking
5. Carlton Panorama: Taliesin 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

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

Distances

**Formulas**

\[ \text{Distance}_{\text{lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1) \]
\[ \text{Distance}_{\text{long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3) \]

\[ \text{Distance} = \sqrt{ (\text{Distance}_{\text{lat}})^2 + (\text{Distance}_{\text{long}})^2 } \]

**Distance between Cape Town & Johannesburg**

\[ \text{Distance}_{\text{lat}} = 69.1 \times (33° - 26°) \]
\[ = 69.1 \times (7°) = 483.7 \]

**Distance between Johannesburg & Pretoria**

\[ \text{Distance}_{\text{lat}} = 69.1 \times (25° - 28°) \]
\[ = 69.1 \times (3°) = 207.3 \]

**Distance between Pretoria & Cape Town**

\[ \text{Distance}_{\text{lat}} = 69.1 \times (33° - 25°) \]
\[ = 69.1 \times (8°) = 552.8 \]

Please label the cities mentioned above on the map.

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. Alaska 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. Alaska Zoo - 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 Boguck - Archaeological Dig
2. Baranof Museum
3. Orion's Board and Canoe - 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
Distance Lat = 69.1 x (Lat₂ - Lat₁)
Distance Long = 69.1 x (Long₂ - Long₁) x cos(Lat₁ / 57.3)
Distance = \sqrt{(Distance \ Lat)² + (Distance \ Long)²}

Distance between Anchorage & Fairbanks
Distanceₐₙ = 69.1 x (64° - 61°)
\[= 69.1 \times (3°) = 207.3\]  
Distanceₜₒₙ = 69.1 x (147° - 150°) x cos(61° / 57.3) \[= -207.3 \times 0.999827391 = -207.3\]  
Distance = (207.3)² + (-207.3)² = (42957.29) + (42957.29) = 85914.58
293 miles

Distance between Fairbanks & Kodiak
Distanceₖᵦ = 69.1 x (57° - 64°)
\[= 69.1 \times (-7°) = -483.7\]  
Distanceₜₒₖᵦ = 69.1 x (152° - 147°) x cos(64° / 57.3) \[= 345.5 \times 0.999809996 = 345.4\]  
Distance = (-483.7)² + 345.4² = (233985.69) + (119301.16) = 353286.85
594 miles

Distance between Kodiak & Anchorage
Distanceₖᵦ = 69.1 x (61° - 57°)
\[= 69.1 \times 4° = 276.4\]  
Distanceₜₒₖᵦ = 69.1 x (150° - 152°) x cos(57° / 57.3) \[= -138.2 \times 0.999849285 = -138.18\]  
Distance = (276.4)² + (-138.18)² = (76538.96) + (19093.71) = 95404.67
309 miles

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

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. Royal Tennis Observation Deck
4. Melbourne Aquarium
5. Melbourne Art Museum

Adelaide: 34° S & 138° E

Things To Do:
1. Adelaide Zoo
2. Adelaide Symphony Orchestra / Symphony
4. Tandanya Aboriginal Cultural Institute / Cultural Museum
5. Botanic Gardens

Native Animals
1. Cassowary
   *Casuarius casuarius*
2. Koala
   *Phascolarctos cinereus*
3. Western Gray Kangaroo
   *Macropus fuliginosus*
4. Emu
   *Dromaius novaehollandiae*
5. Great White Shark
   *Carcharodon carcharias*

Distances

**Formula**

\[ \text{Distance} = 69.1 \times \left( \frac{\text{Distance}_\text{Lat}}{57.3} \right)^2 + \left( \frac{\text{Distance}_\text{Long}}{50} \right)^2 \]

**Distance between Alice Springs & Adelaide**

\[ \text{Distance}_\text{Lat} = 69.1 \times (\text{Lat} \text{2} - \text{Lat} \text{1}) \]
\[ \text{Distance}_\text{Long} = 69.1 \times (\text{Long} \text{2} - \text{Long} \text{1}) \times \cos(\text{Lat} \text{1} / 57.3) \]

Distance = \( \sqrt{\left( \text{Distance}_\text{Lat} \right)^2 + \left( \text{Distance}_\text{Long} \right)^2} \)

**Distance between Melbourne & Adelaide**

Distance between Alice Springs & Adelaide

\[ \text{Distance}_\text{Lat} = 69.1 \times (37° - 34°) \]
\[ \text{Distance}_\text{Lat} = 69.1 \times (23° - 37°) \]
\[ \text{Distance}_\text{Long} = 69.1 \times (-14°) \]

\[ \text{Distance} = 967.4 \text{ miles} \]

**Distance between Melbourne & Alice Springs**

\[ \text{Distance}_\text{Lat} = 69.1 \times (23° - 37°) \]
\[ \text{Distance}_\text{Lat} = 69.1 \times (-14°) \]

\[ \text{Distance} = 1230 \text{ miles} \]

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

Tour Of China

Beijing: 39° N & 116° E
Things To Do:
1. Forbidden City  
   Administration Site of the Ming & Qing Dynasties
2. Great Wall  
3. Summer Palace  
4. Tian'anmen Square  
5. Grand View Garden

Shanghai: 31° N & 121° E
Things To Do:
1. Shanghai Museum  
2. Bund  
3. Huangpu River Trip  
4. Modern Pudong  
5. Former Residence of the Chi - na Republic Founder

Kunming: 25° N & 102° E
Things To Do:
1. Black Dragon Pool  
2. Dianchi Lake  
3. Stone Forest  
4. Xishan Scenic Spot  
5. West Mountain

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

Distance Formula:
\[ \text{Distance} = \sqrt{\left(\text{Distance Latitude} \right)^2 + \left(\text{Distance Longitude} \right)^2} \]

Distance Between Beijing & Shanghai:
- Distance Latitude = 69.1 x (30° - 20°) = 69.1 x (10°) = 691
- Distance Longitude = 69.1 x (121° - 116°) x cos (39° / 57.3) = 69.1 x (5°) x cos (0.68028) = 345.5 x 0.99992 = 345.48
- Distance = \sqrt{691^2 + 345.48^2} = 826.75
  - 826.75 miles

Distance Between Shanghai & Kunming:
- Distance Latitude = 69.1 x (20° - 30°) = 69.1 x (10°) = 691
- Distance Longitude = 69.1 x (102° - 120°) x cos (31° / 57.3) = 69.1 x (18°) x cos (0.54102) = 3132.8
- Distance = \sqrt{691^2 + 3132.8^2} = 1377
  - 1377 miles

Distance Between Kunming & Beijing:
- Distance Latitude = 69.1 x (30° - 25°) = 69.1 x (5°) = 345.5
- Distance Longitude = 69.1 x (102° - 116°) x cos (25° / 57.3) = 69.1 x (14°) x cos (0.43630) = 967.6
- Distance = \sqrt{345.5^2 + 967.6^2} = 1020.9
  - 1020.9 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. Markisches Museum
   Art and Musical Instrument Museum

Hamburg:

Things To Do:
1. Aegina Zitadelle
   Theatre
2. Teater Carl Hagenbeck
   Zoo
3. Anhaltische Kunsthalle
   Art Museum
4. Altonannt Museum
   History Museum
5. Altonannt 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 Pinakothek
   Art Gallery

Native Animals

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

Distances

Formula
Distance Lat = 69.1 x (Lat2 - Lat1)
Distance Long = 69.1 x (Long2 - Long1) x cos(Lat1 / 57.3)

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

Distance between Berlin & Hamburg

Distance Lat = 69.1 x (31° - 52°)
69.1 x (1°) = 69.1

Distance Long = 69.1 x (9° - 13°) x cos(52°/57.3)
69.1 x (-4°) x cos(60.975511) = -276.4 x 0.999985466 = -276.37

Distance = \sqrt{(-276.37)^2 + (-276.4)^2} = 8115.1869

284 miles

Distance between Hamburg & Munich

Distance Lat = 69.1 x (48° - 52°)
69.1 x (-5°) = -345.5

Distance Long = 69.1 x (11° - 9°) x cos(52°/57.3)
69.1 x (2°) x cos(60.975511) = 138.2 x 0.999985466 = 138.18

Distance = \sqrt{(-345.5)^2 + (138.18)^2} = 372 miles

Distance between Munich & Berlin

Distance Lat = 69.1 x (31° - 48°)
69.1 x (1°) = 69.1

Distance Long = 69.1 x (13° - 11°) x cos(48°/57.3)
69.1 x (2°) x cos(60.87066) = 139.2 x 0.999983121 = 139.19

Distance = \sqrt{(69.1)^2 + (139.19)^2} = 594.0336

399 miles

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

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Fantasy Travel

Tour Of Indonesia

Jakarta: 6° S & 106° E
Things To Do:
1. Old Batavia Historic Site
2. Jakarta Museum
3. National Monument Historic Museum
4. Sunda Kelapa
   Old Dutch Port
5. Tanah Abang Maritime
   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. Negari Sum-Sel Museum
2. Rubber and Coffee Plantations
3. Benteng Historic Fort
4. Ampere 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
   Amblyonyx cinereus
5. Sumatran Tiger
   Panthera tigris sumatrae

Distances

Formula
Distance Lat = 69.1 x (Lat₂ - Lat₁)
Distance Long = 69.1 x (Long₂ - Long₁) x cos(Lat₁ / 57.3)
\[ \sqrt{(Distance \ Lat}_{due}² + (Distance \ Long}_{due}²) \]

Distance between Jakarta & Palembang
\[
\begin{align*}
Distance_{Lat} &= 69.1 \times (7° - 6°) = 69.1 \times (-1°) = -69.1 \\
Distance_{Long} &= 69.1 \times (104° - 106°) \times \cos(6°/57.3) \\
&= 69.1 \times (-2°) \times \cos(0.1047) \times \cos(138.2) \times \cos(0.0699) \\
&= 69.1 \times (-2°) \times 0.99998833 \times -0.9980 \\
&= 69.1 \times (-2°) \times -0.9980 \\
&= 138.2 \times (69.1 x (-2°)) \\
&= 138.2 \times (-138.2) \\
&= 249.328 \times (-0.3868) \\
&= 249.328 \times -138.2 \\
&= 62072.53
\end{align*}
\]

249 miles

Distance between Palembang & Surabaya
\[
\begin{align*}
Distance_{Lat} &= 69.1 \times (4° - 3°) = 69.1 \times (1°) = 69.1 \\
Distance_{Long} &= 69.1 \times (104° - 112°) \times \cos(3°/57.3) \\
&= 69.1 \times (-8°) \times \cos(0.002556/2) \\
&= 69.1 \times (-8°) \times 0.99999682 \\
&= 69.1 \times (-8°) \times -0.00040582 \\
&= 552.8 \times (69.1 x (-8°)) \\
&= 552.8 \times -552.8 \\
&= 305857.84 \times -0.381984.8 \\
&= 618 miles
\end{align*}
\]

Distance between Surabaya & Jakarta
\[
\begin{align*}
Distance_{Lat} &= 69.1 \times (6° - 7°) = 69.1 \times (1°) = 69.1 \\
Distance_{Long} &= 69.1 \times (106° - 112°) \times \cos(7°/57.3) \\
&= 69.1 \times (-6°) \times \cos(0.121264/2) \\
&= 69.1 \times (-6°) \times 0.99999772 \\
&= 69.1 \times (-6°) \times -0.0002272 \\
&= 416.6 \times (69.1 x (-6°)) \\
&= 416.6 \times -416.6 \\
&= 171893.6 \times -0.41667 \\
&= 420 miles
\end{align*}
\]

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

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 Peak
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-lobed Amazon Parrot  Amazona autumnalis autumnalis
5. Green Iguana  Iguana iguana

Distances

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

Distance between Rio De Janeiro & Brasilia

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

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

Distance between Brasilia & Buenos Aires

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

Distance between Buenos Aires & Rio De Janeiro

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

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. Raymond Boulevard Hiking
4. Tampa Art Museum
5. Florida Aquarium

**Miami:** 25° N & 80° W

**Things To Do:**
1. South Beach
2. Miami Seaquarium
3. Metrorail
4. Everglades Safari Park Conservation Tour
5. Palm Harbor Seabird Station Rehabilitation

**Cape Kennedy:** 28° N & 80° W

**Things To Do:**
1. Kennedy Space Center
2. LC39 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 ajaja*
3. Florida Panther *Puma concolor coryi*
4. Wood Stork *Mycteria americana*
5. Black Bear *Ursus americanus floridanus*

**Distances**

**Formula**

\[
\text{Distance}_{\text{lat}} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1) \\
\text{Distance}_{\text{long}} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3) \\
\text{Distance} = \sqrt{\left(\text{Distance}_{\text{lat}}\right)^2 + \left(\text{Distance}_{\text{long}}\right)^2}
\]

**Distance between Tampa & Miami**

\[
\text{Distance}_{\text{lat}} = 69.1 \times (25° - 27°) = 69.1 \times (-2°) = -138.2 \\
\text{Distance}_{\text{long}} = 69.1 \times (80° + 82°) \times \cos(27°/57.3) \\
= 69.1 \times (162°) \times \cos(0.467204188) \\
= 69.1 \times (-0.999664182) = -68.2 \\
\text{Distance} = \sqrt{(-138.2)^2 + (-68.2)^2} \\
= 188.1 \text{ miles}
\]

**Distance between Miami & Cape Kennedy**

\[
\text{Distance}_{\text{lat}} = 69.1 \times (28° - 25°) = 69.1 \times (3°) = 207.3 \\
\text{Distance}_{\text{long}} = 69.1 \times (80° - 80°) \times \cos(25°/57.3) \\
\text{Distance}_{\text{lat}} = 69.1 \times (25°) \times \cos(0.442118688) \\
= 69.1 \times (0.999664182) = 69.1
\]

**Distance between Cape Kennedy & Tampa**

\[
\text{Distance}_{\text{lat}} = 69.1 \times (-1° - 27°) = 69.1 \times (-28°) = -191.2 \\
\text{Distance}_{\text{long}} = 69.1 \times (82° - 80°) \times \cos(28°/57.3) \\
= 69.1 \times (2°) \times \cos(0.488605195) \\
= 69.1 \times (0.9962631) = 68.2 \\
\text{Distance} = \sqrt{(-191.2)^2 + (68.2)^2} \\
= 214.6 \text{ miles}
\]

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