

# Hexi – PS 7 – 2025-02-11

## EIWL3 Sections 18 and 19

I had repeated issues with timeouts when downloading GeoGraphics. Because of that, I did not re-execute your PS7 notebooks like I usually do (to check for errors upon re-execution). Instead, I just PDF'd them the way that you gave them to me.

### Exercises from EIWL3 Section 18

```
GeoDistance[New York City CITY, London CITY]
```

Out[\*]=  
3453.71 mi

```
GeoDistance[New York City CITY, London CITY]/
```

```
GeoDistance[New York City CITY, San Francisco CITY]
```

Out[\*]=  
1.35109

```
UnitConvert[GeoDistance[Sydney CITY, Moscow CITY], km]
```

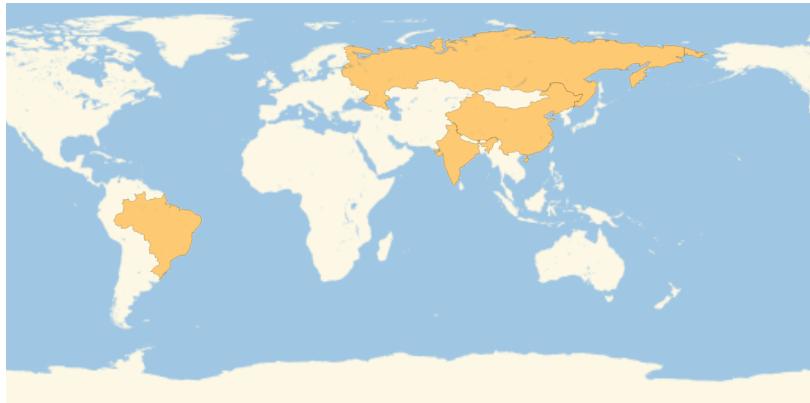
Out[\*]=  
14 387. km

```
GeoGraphics[United States COUNTRY]
```



```
GeoListPlot[{Brazil COUNTRY, Russia COUNTRY, India COUNTRY, China COUNTRY}]
```

Out[•]=



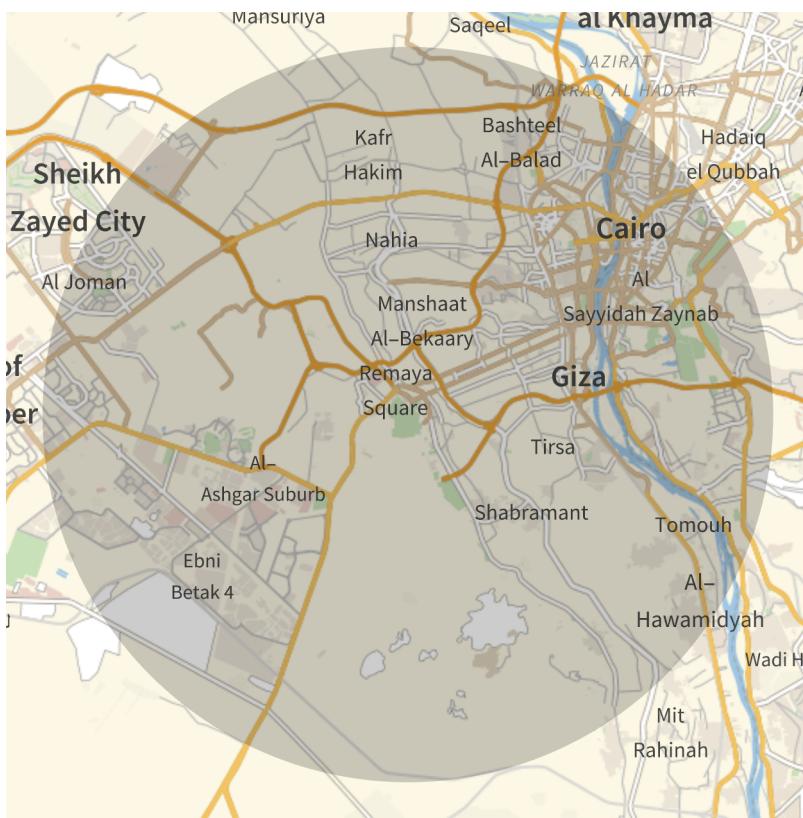
```
GeoGraphics[GeoPath[{New York City CITY, Beijing CITY}]]]
```

Out[•]=



**GeoGraphics[GeoDisk[Great Pyramid of Giza BUILDING, 10 mi]]**

Out[•]=



**GeoGraphics[**

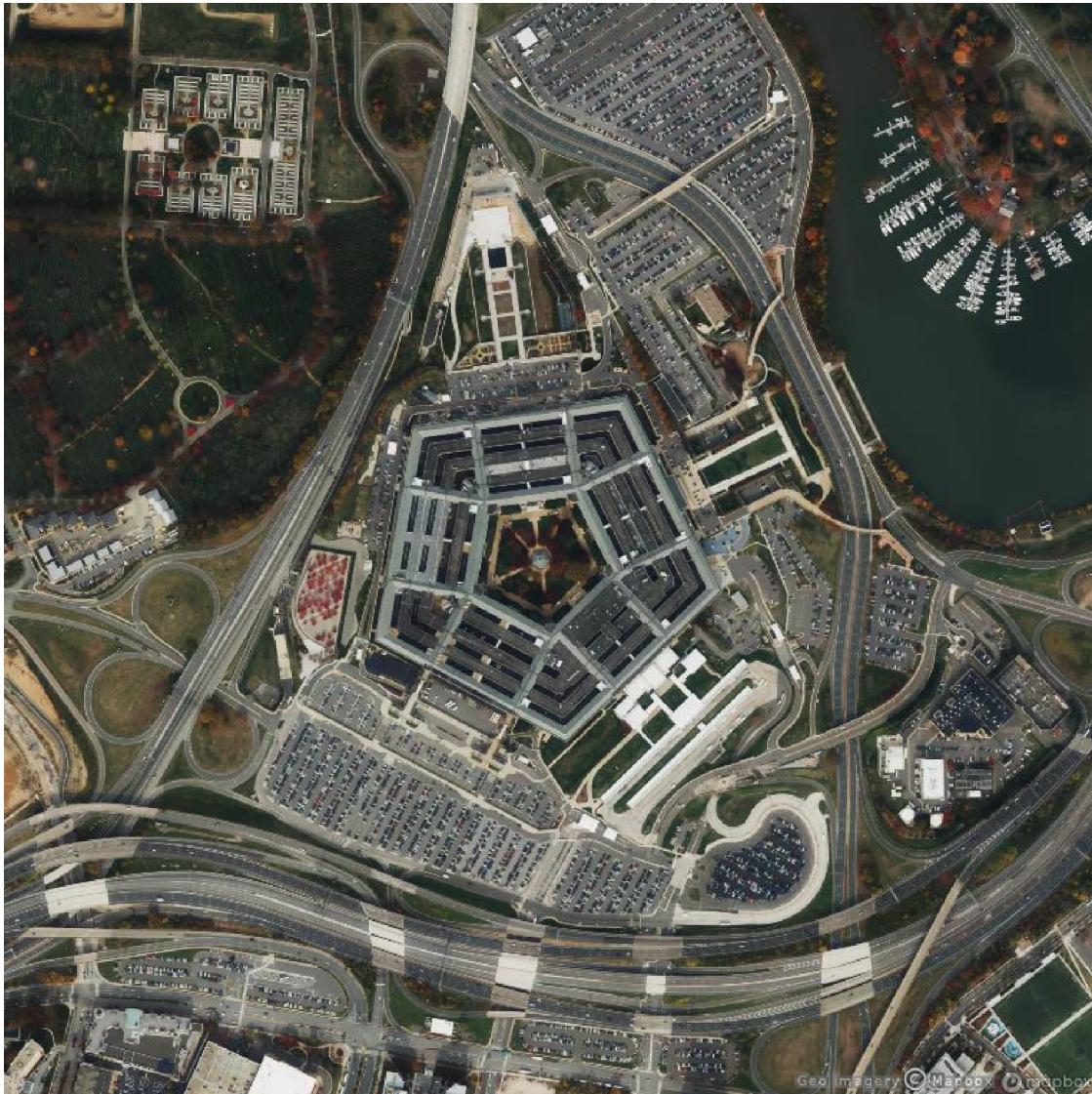
**GeoDisk[New York City CITY], GeoDistance[{New York City CITY, San Francisco CITY}]]]**

Out[•]=



```
GeoImage[GeoDisk[The Pentagon BUILDING, 0.4 mi]]
```

Out[\*]=



```
GeoNearest["Country", GeoPosition["NorthPole"], 5]
```

Out[\*]=

```
{Greenland, Canada, Russia, Svalbard, United States}
```

Out[\*]=

```
{Greenland, Canada, Russia, Svalbard, United States}
```

```
EntityValue[GeoNearest["Country", {45, 0}, 3], "Flag"]
```

Out[\*]=



```
GeoListPlot[GeoNearest["Volcano", Rome CITY, 25]]
```

Out[\*]=



```
Latitude[New York City CITY] - Latitude[Los Angeles CITY]
```

Out[\*]=

6.64488°

## Exercises from EIWL3 Section 18

Now - Mon 1 Jan 1900

Out[\*]=

45 696. days

Out[\*]=

45 696. days

**DayName** [ Sat 1 Jan 2000 ]

Out[ ]= Saturday

Out[ ]= Saturday

**Today - 100 000 days**

Out[ ]= Wed 28 Apr 1751

Out[ ]= Wed 28 Apr 1751

**LocalTime** [ Delhi CITY ]

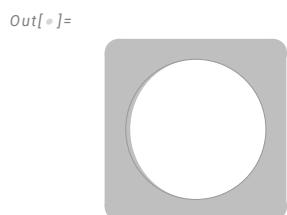
Out[ ]= February 11, 2025 3:20 am GMT+5.5

Out[ ]= February 11, 2025 3:20 am GMT+5.5

**Sunset[Here, Today] - Sunrise[Here, Today]**

Out[ ]= 10.0676 h

**MoonPhase[Now, "Icon"]**

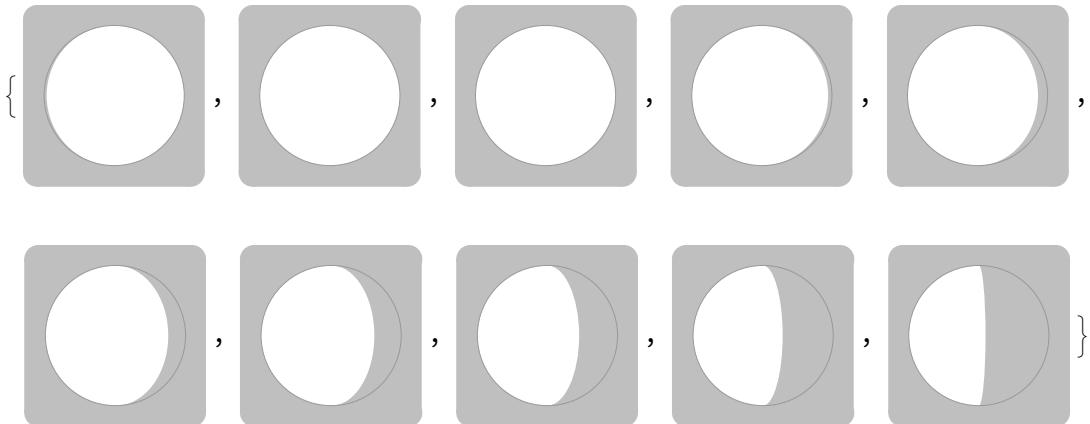


**Table[MoonPhase[x], {x, Mon 10 Feb 2025, Thu 20 Feb 2025, 1 days}]**

Out[ ]= {0.941191, 0.980275, 0.998115, 0.99507, 0.972393, 0.931991, 0.876155, 0.807337, 0.727997, 0.640555, 0.547426}

```
Table[MoonPhase[x, "Icon"], {x, Tue 11 Feb 2025, Thu 20 Feb 2025, 1 days}]
```

Out[*#*]=



```
Sunrise[London CITY, Today] - Sunrise[New York City CITY, Today]
```

Out[*#*]=

-4.53767 h

This is an error. See p. 8 of my solution for the reason.

```
UnitConvert[Today - DateObject[Apollo 11 MANNED SPACE MISSION [lunar landing date]], yr]
```

Out[*#*]=

$\frac{20293}{365}$  yr

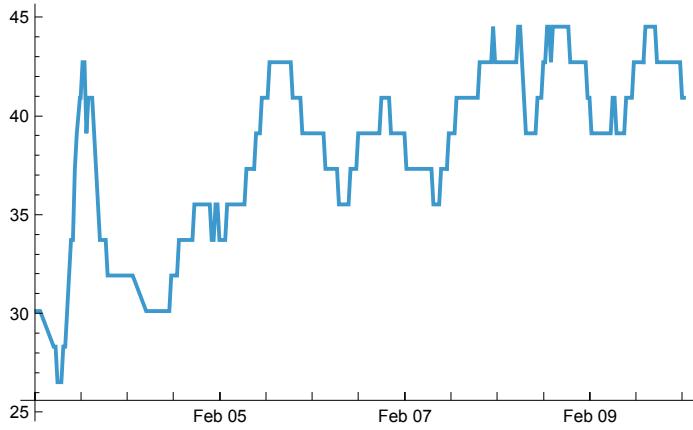
```
AirTemperatureData[Eiffel Tower BUILDING, February 9, 2025 12:00 pm GMT-6]
```

Out[*#*]=

42.8 °F

```
ListLinePlot[AirTemperatureData[Eiffel Tower BUILDING, {Mon 3 Feb 2025, Today}]]
```

Out[*#*]=



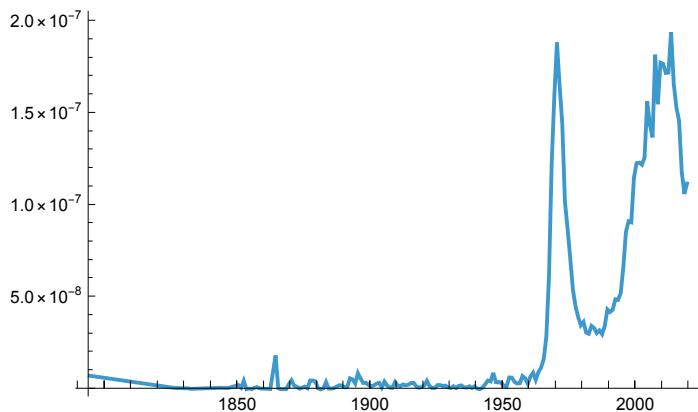
```
AirTemperatureData[New York City CITY, Now] - AirTemperatureData[Los Angeles CITY, Now]
```

Out[ ]=

-23.9 ° F

```
ListLinePlot[WordFrequencyData["groovy", "TimeSeries"]]
```

Out[ ]=



```
United Kingdom COUNTRY [Dated["Population", 2000]] -
```

```
United Kingdom COUNTRY [Dated["Population", 1900]]
```

Out[ ]=

20 759 628 people