

Solution Review: Plotting Temperatures

Solution review to the plotting temperatures exercise.

WE'LL COVER THE FOLLOWING ^

- Solution
- Explanation

Solution

```
import numpy as np
import matplotlib.pyplot as plt

land_temp = np.array([6, 7, 8, 10, 14, 16, 18, 17, 15, 12, 11, 9])
sea_temp = np.array([4, 5, 10, 11, 12, 16, 19, 18, 14, 10, 8, 5])

fig, ax = plt.subplots(2, 1)
ticks = ['jan', 'feb', 'mar', 'apr', 'may', 'jun', 'jul', 'aug', 'sep', 'oct', 'nov', 'dec']

x = np.linspace(0, 13, 12)
# commands for plotting the first graph
ax[0].plot(x, land_temp, 'r', label = 'air temp')
ax[0].plot(x, sea_temp, 'b', label = 'sea temp')
ax[0].set_xticks(x)
ax[0].set_xticklabels(ticks)
ax[0].legend(loc = 'best')
ax[0].set_ylabel('temp (Celsius)')
ax[0].set_xlabel('months')

# commands for plotting the second graph
ax[1].plot(x, land_temp - sea_temp, 'b-o')
ax[1].set_xticks(x)
ax[1].set_xticklabels(ticks)
ax[1].set_ylabel('land - sea temp (Celsius)')
ax[1].set_xlabel('months')

# to prevent overlap in plots
fig.tight_layout()

# saving the figure
fig.savefig('output/out.png')
```



Explanation

- On line 7, we have divided the figure into a 2×1 grid.
- On line 8, we have defined a list containing the names of the months.
- The plotting commands are given in lines 12, 13 and 21.
- In lines 14 - 15 and 22 - 23, we have specified the placement and value of x-ticks on both plots.

In the next lesson, you will plot a 3-D shape: **Torus**.