

Question: Following a trial of a new treatment, you wish to create a plot of the change over the time of the trial ('week') of the patient response ('resp'). The patient data is shown below.

Answer:

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Create the DataFrame
data = {
   "week": [0, 1, 2, 3, 4, 5],
   "resp": [91, 89, 82, 75, 59, 53]
```

```
}
patient = pd.DataFrame(data)

# Plot the data using seaborn
sns.lineplot(x="week", y="resp", data=patient)

# Display the plot
plt.show()
```

Explanation:

- 1. The pandas, matplotlib, and seaborn libraries are imported for data manipulation and visualization.
- 2. A dictionary 'data' is used to create the DataFrame 'patient' with columns for week and response.
- 3. The seaborn 'lineplot' function is used to create a line plot, with 'week' as the x-axis and 'resp' as the y-axis.
- 4. The 'plt.show' function is called to display the plot.