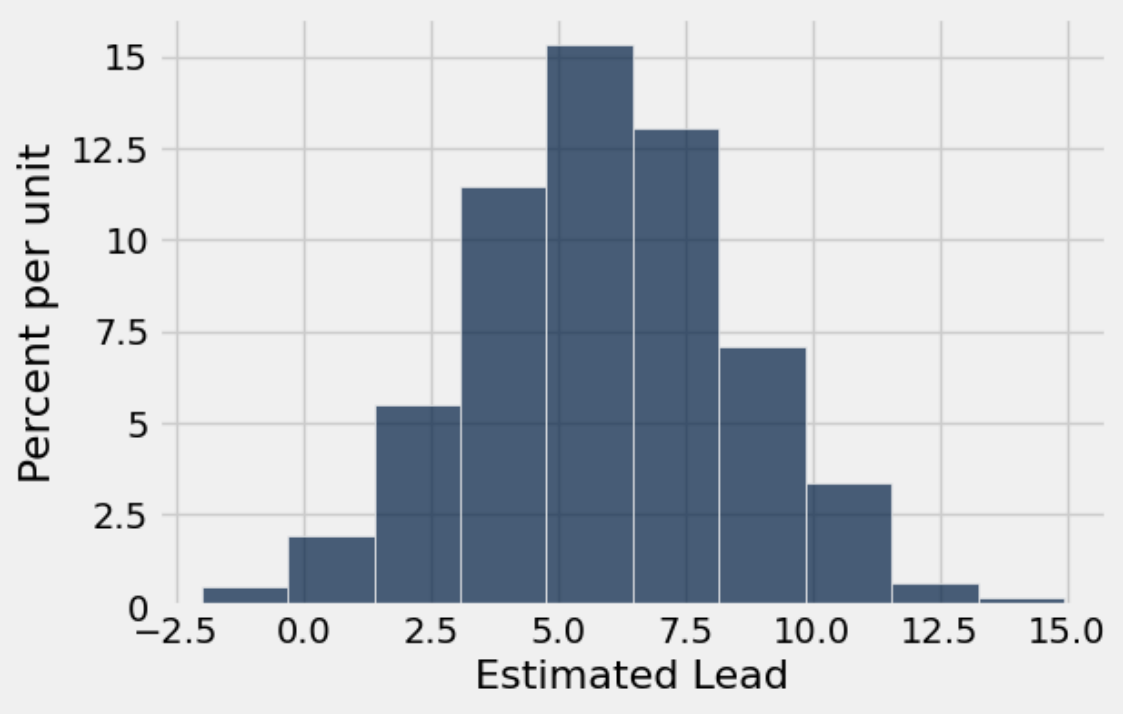

Question 1.5. Write a function called `leads_in_resamples` that returns an array of 2023 elements representing the bootstrapped estimates (the result of calling `one_resampled_difference`) of Imm Thai's lead over Lucky House, Thai Temple, and Thai Basil combined. Afterwards, run the cell to plot a histogram of the resulting samples. **(8 Points)**

Hint: If you see an error involving `NoneType`, consider what components a function needs to have!

```
In [52]: def leads_in_resamples():
             resamples_lead_percentage = make_array()
             repetitions = 2023
             for i in np.arange(repetitions):
                 one_diff = one_resampled_difference(votes)
                 resamples_lead_percentage = np.append(resamples_lead_percentage, one_diff)

             return resamples_lead_percentage

         sampled_leads = leads_in_resamples()
         Table().with_column('Estimated Lead', sampled_leads).hist("Estimated Lead")
```



Question 2.1. Jonathan also created 70%, 90%, and 99% confidence intervals from the same sample, but he forgot to label which confidence interval represented which percentages! ***First***, **match each confidence level (70%, 90%, 99%) with its corresponding interval in the cell below** (e.g. ___ % CI: [52.1, 54] → replace the blank with one of the three confidence levels). ***Then***, **explain your thought process** and how you came up with your answers. **(10 Points)**

The intervals are below:

- [50.03, 55.94]
- [52.1, 54]
- [50.97, 54.99]

Hint: If you are stuck on this question, try looking over Chapters 13.3 and 13.4 of the textbook.

The first interval would correspond to 99% confidence interval because with wider interval, we could be more certain that the real statistic value lies in that range. The second would correspond to 70% confidence interval, as it has the smallest range. The third one corresponds to 90% confidence interval