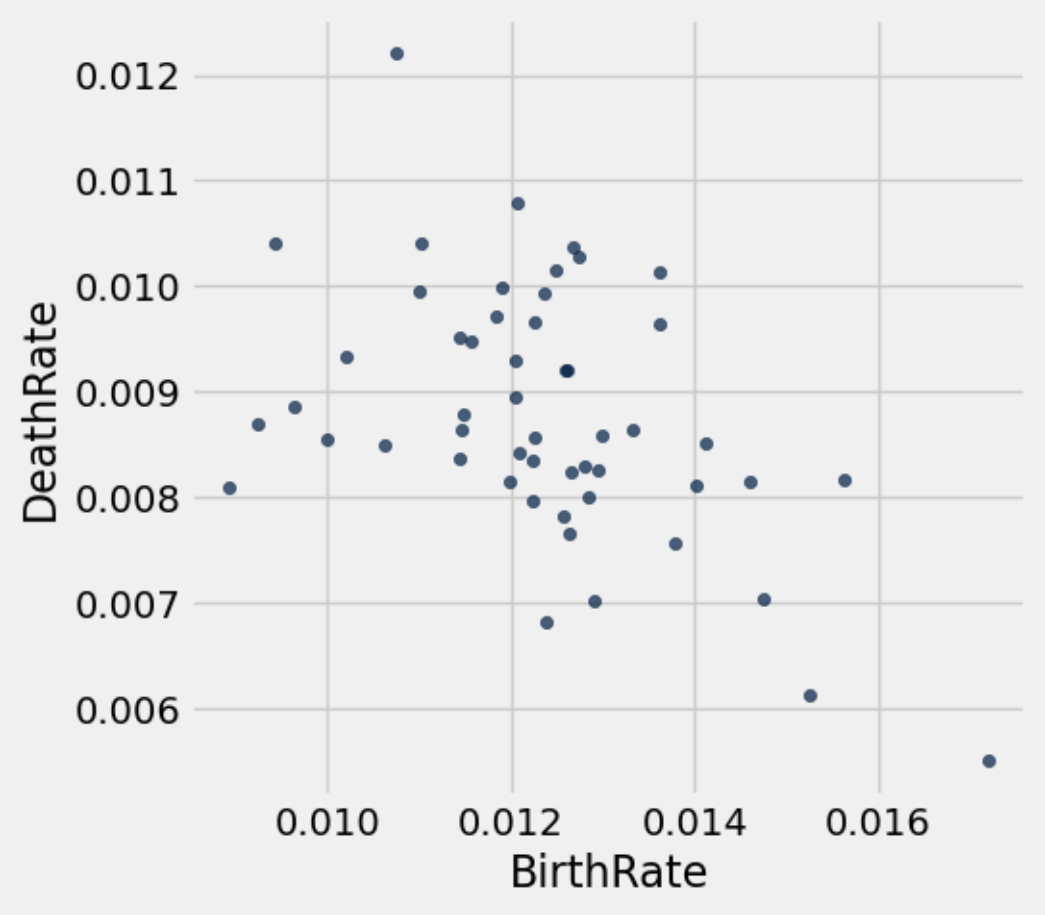
Question 5. In the code cell below, create a visualization that will help us determine if there is an association between birth rate and death rate during this time interval. It may be helpful to create an intermediate table here. **(4 Points)**

Things to consider:

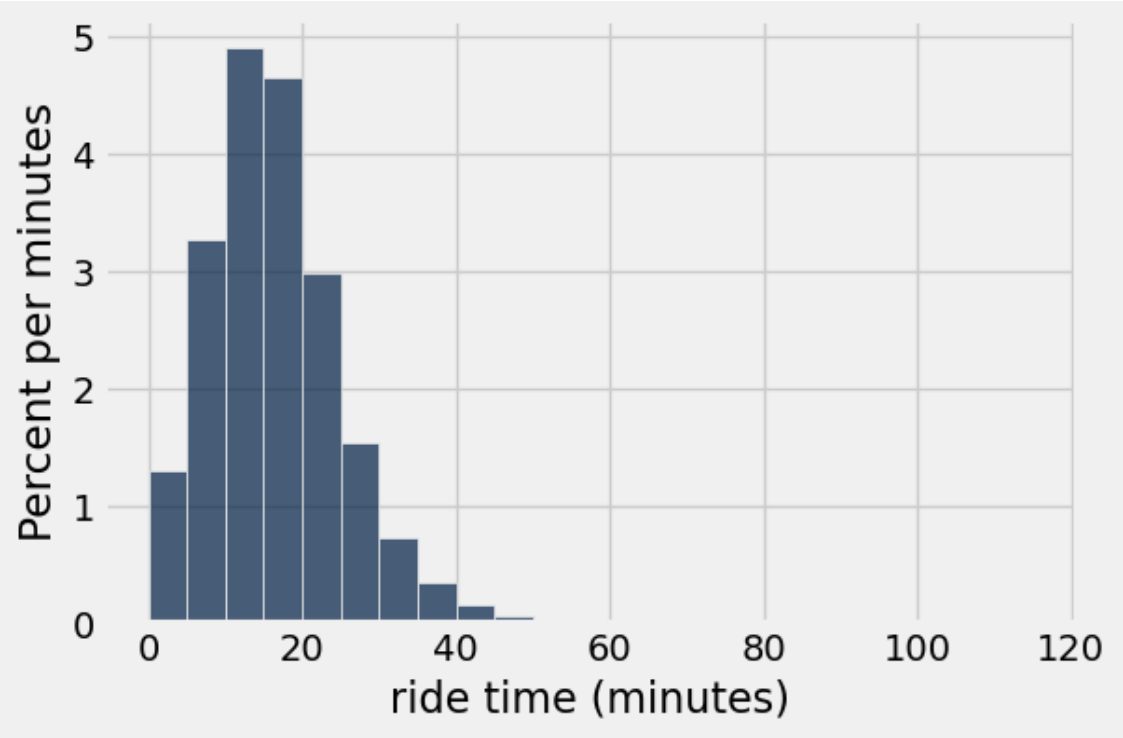
- What type of chart will help us illustrate an association between 2 variables?
- How can you manipulate a certain table to help generate your chart?
- Check out the Recommended Reading for this homework!

In [109]:
```
# In this cell, use birth_rates and death_rates to generate your visualization
birth_rates = pop.column('BIRTHS') / pop.column('2015')
death_rates = pop.column('DEATHS') / pop.column('2015')
inter_tbl = Table().with_columns(
            "BirthRate", birth_rates,
            "DeathRate", death_rates
)
inter_tbl.scatter("BirthRate","DeathRate")
```



Question 1. Produce a histogram that visualizes the distributions of all ride times in Boston using the given bins in `equal_bins`. **(4 Points)**

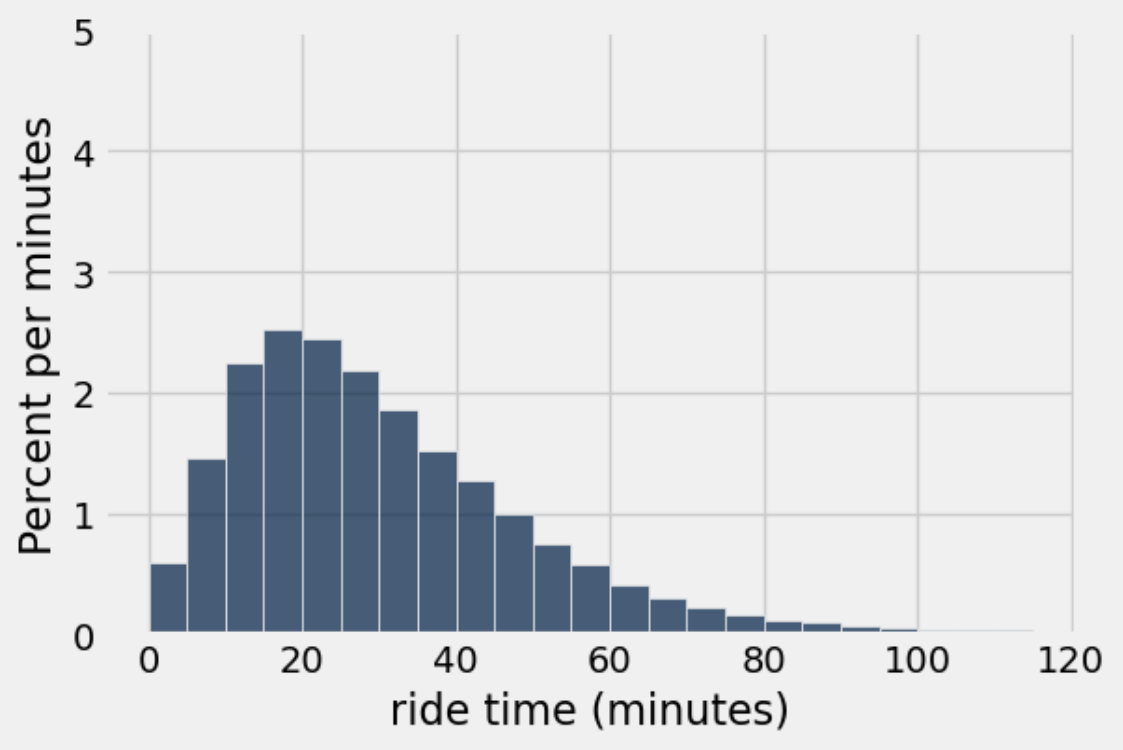
```
In [113]: equal_bins = np.arange(0, 120, 5)
          boston.hist("ride time", unit="minutes", bins=equal_bins)
```



Question 2. Now, produce a histogram that visualizes the distribution of all ride times in Manila using the given bins. **(4 Points)**

```
In [114]: equal_bins = np.arange(0, 120, 5)
          manila.hist("ride time", unit="minutes", bins=equal_bins)

          # Don't delete the following line!
          plots.ylim(0, 0.05);
```



Question 6. Identify one difference between the histograms, in terms of the statistical properties. Can you comment on the average and/or skew of each histogram? **(4 Points)**

Hint: The best way to do this is to compare the two histograms (from 3.1 and 3.2) visually.

Both graphs are right skewed but Manila has a longer tail than Boston. So Manila will have a higher mean or average and median than Boston.

Question 7. Why is your solution in Question 6 the case? Based on one of the following two readings, why are the distributions for Boston and Manila different? **(4 Points)**

- Boston reading
- Manila reading

Hint: Try thinking about external factors of the two cities that may be causing the difference! There may be multiple different factors that come into play.

Based on the reading, the reason that Manila has a longer average and median ride time is because of their bad urbaning planning. Inefficient design of roads makes people spend more time on the Uber cars. And it has not enough public transit. Boston's reading is about weather. In my opinion, Boston might have a better public transit system where people can use it in case of snow and rain.

Question 2. State at least one reason why you chose the histogram from Question 1. **Make sure to clearly indicate which histogram you selected** (ex: "I chose histogram A because …"). **(5 Points)**

I chose histogram C because we can see that x is not the most dense nor nothing near the value 0.

Question 4. State at least one reason why you chose the histogram from Question 3. **Make sure to clearly indicate which histogram you selected** (ex: "I chose histogram A because …"). **(5 Points)**

I chose histogram B becuase y-axis has a gap near value 0.