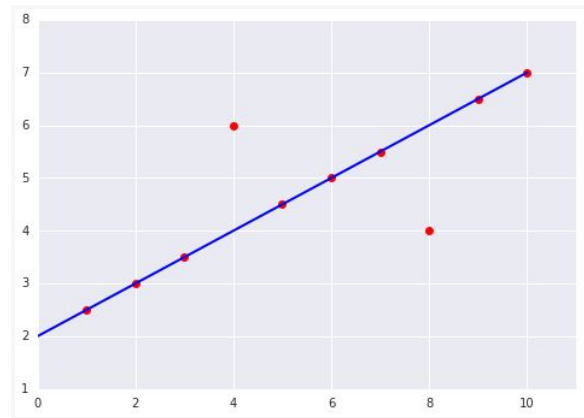
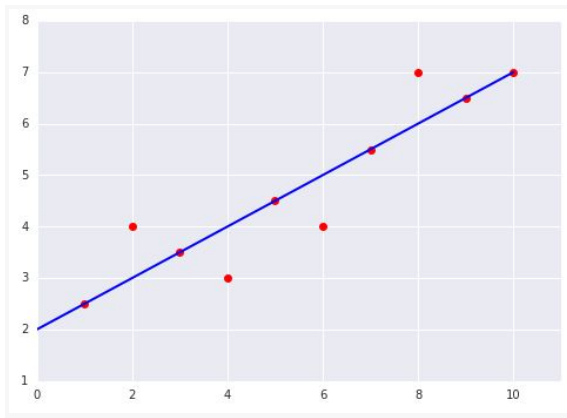


Mean Squared Error

Consider the following two plots:



Explore the options below.

❖ Which of the two data sets shown in the preceding plots has the **higher** Mean Squared Error (MSE)?

- The dataset on the left.
- The dataset on the right.

The eight examples on the line incur a total loss of 0. However, although only two points lay off the line, both of those points are *twice* as far off the line as the outlier points in the left figure. Squared loss amplifies those differences, so an offset of two incurs a loss four times greater than an offset of one.

$$\text{MSE} = (0^2 + 0^2 + 0^2 + 2^2 + 0^2 + 0^2 + 0^2 + 2^2 + 0^2 + 0^2) / 10 = 0.8$$

Correct answer