

1. A
2. A
3. A
4. C
5. A
6. A
7. C
8. A
9. B
10. Histograms indicate the whole frequency distribution of a variable, whereas the boxplot summarises its most prominent features. These features include median and spread as well as the extent and nature of departures from symmetry, and the possible presence of observations having extreme values (outliers).
11. Classification. This algorithm will predict data type from defined data arrays. For example, it may respond with yes/no/not sure.  
Regression. The algorithm will predict some values. For example, weather forecast for tomorrow.  
Ranking. The model will predict an order of items
12. To assess statistical significance, you would use hypothesis testing. The null hypothesis and alternate hypothesis would be stated first. Second, you'd calculate the p-value, which is the likelihood of getting the test's observed findings if the null hypothesis is true. Finally, you would select the threshold of significance (alpha) and reject the null hypothesis if the p-value is smaller than the alpha — in other words, the result is statistically significant.
13. exponential distributions do not have a log-normal distribution or a Gaussian distribution. In fact, any type of data that is categorical will not have these distributions as well. Example: Duration of a phone car, time until the next earthquake, etc.
14. Income is the classic example of when to use the median instead of the mean because its distribution tends to be skewed. The median indicates that half of all incomes fall below 27581, and half are above it. For these data, the mean overestimates where most household incomes fall.
15. The likelihood function represents the probability of random variable realizations conditional on particular values of the statistical parameters.