ANSWERS (Form B)

(1) For these data the Empirical Rule ___ apply. **(B)**

(2) The median of these data is ___ 1.5. **(A)**

(3) The 90th percentile of these data is ___ 10. **(A)**

(4) Regarding the smallest values in these data we can say that ___. **(C)**

(5) Standardizing Y would create a new variable that has a ___ distribution. **(A)**

(6) Standardizing Y would create a new variable where the majority of observations are ___. **(B)**

(7) A November 6th, 2011 *New York Times* article ("Merger of M…This is an unethical use of statistics because ___. **(B)**

(8) The heights of the bars relate to which kind of probability? **(C)**

(9) The original data containing the price changes, which ultimately led to the production of the above chart, are ___ data. **(C)**

(10) For it to be a valid summary, which are an underlying assumption behind this chart? **(D)**

(11) Consider this excerpt from a 2011 academic research paper in economics "The Price Effects of a Larger Merger …The reported ratio of 2.8 in the last sentence measures ___. **(A)**

(12) This graphic shows what is best described as ___. **(A)**

(13) This graphic illustrates ___. **(A)**

(14) For Hungary ___ is close to zero. **(A)**

(15) By increasing the sample size for a linear regression you should expect which of the following? **(E)**

(16) Which best states the primary research question? **(B)**

(17) The passage describes observational data. Which would be necessary conditions if we imagine experimental data that could be used to measure the causal effect? **(C)**

(18) Which is NOT an unobserved (aka lurking or confounding) variable? **(D)**

(19) A politician is believed to have a 55 percent approval rating. What is the chance that a pollster randomly samples 500 people and finds that fewer than 250 approve of the politician? **(A)**

(20) Consider a statistical analysis of the linear relationship between the weight of laptops in kilograms (kg) and their retail price in hundreds of dollars ($100s). An interpretation that "A one kg increase in weight is on average associated with a price that is $67 lower" means that ___. **(E)**

(21) What is the mean of Y? **(B)**

(22) What is the median of X? **(A)**

(23) There is a ___ correlation between X and Y. **(B)**

(24) When Y equals 1 how often is X equal to 1? **(B)**

(25) Suppose ten members of the same extended family all work at the TTC. What is the chance that on a day when they are all working none of them is screened? **(D)**

(26) What is the chance an employee working eight consecutive days is screened more than once? **(B)**

(27) What percent of retail outlets offer the LaraBar at $1.99 or less? **(D)**

(28) How much does the LaraBar cost at the most expensive retail outlets: the top 3 percent? **(E)**

(29) In the 1971 article "Belief in the Law of Small Numbers" Tversky and Kahneman mention a researcher who tests two toys – Toy 1 and Toy 2 – and observes that the first 4 of 5 infants prefer Toy 1. The researcher feels confident that Toy 1 is superior given this evidence. This is an example of ___. **(C)**

(30) What percent of these data are more than two standard deviations below the mean? **(A)**

(31) Which of the graphs to the right corresponds to the same data as the STATA summary above? **(C)**

(32) The original data Kahneman received in a spreadsheet are ___ data. **(C)**

(33) If skill played an even smaller role we would expect the correlation to ___. **(C)**

(34) If instead of negatively correlated the enrolments were positively across campuses then the mean total enrolment for both campuses combined would ___. **(C)**

(35) What is the standard deviation of the total enrolment for both campuses combined? **(C)**