ECO220Y1Y, Test #1, Prof. Murdock SOLUTIONS

(1) Because Carlin et al. *randomly* set which video a participant is shown, we *can* infer causality from these experimental data. However, time spent making a choice is *not* randomly set and will be endogenous – related to unobserved/confounding/omitted/lurking variables that are also related with the choice of the best card – and hence we *cannot* infer causality with these observational variables. For example, a lurking variable would be level of understanding of financial decisions and ability to evaluate the technical terms and conditions of each card: this would affect *both* the time spent and the choice of a best card.

(2) (a) The only phrase that applies is *extremely positively skewed*.

(b) 126.6229 ± 34.79833 yields the interval ($91,825, $161,421). Nobody makes less than $100,025 and the 90th percentile is $160,791. Hence, somewhat more than 90% of employees have a salary within one s.d. of the mean (but it is just a bit more and less than 95%).

(3) 10% (=100*3/30); 37.5% (=100*3/8); 1.0% (=100*3/291); stronger

(b) 291/4 = 72.5 so we need to know what is the competitiveness of the students closest to that when we sort from smallest to largest competitiveness: (6+3+6+7+10+32)=64 and (6+3+6+7+10+32+49)=113. So, the 25th percentile is a