d) What is the empirical cumulative distribution function of the randomization distribution?

$$\hat{F}(x) = \frac{(\text{number of values } \le x)}{15}$$

e) Is there evidence that the difference in means is due to random chance? If you did find evidence state two possible reasons?

$P(D \ge 3.75) = \frac{3}{15}$ and $P(D \le -3.75) = \frac{1}{15}$. The two-sided p-value is $2 \times \min\{P(D \ge 3.75), P(D \le -3.75)\} = \frac{2}{15} = 0.13$. There is evidence that difference is due to chance. Two possible reasons: (1) low power; (2) no difference between treatments.