Question 6

You are interested in studying the effect of political knowledge on partisan identification. Party ID is measured on a 7-point scale where 1 indicates a "Strong Republican" and a 7 indicates a "Strong Democrat." The randomly assigned treatment group for your study completed a short class on basic *civics* and the control group completed a short course on *art* appreciation. The data you get back is as follows:

	Civics Class	Art Class
Mean	3.8	3.5
SD	2.4	2.2
N	288	242

a) Provide a point and interval estimate (use $\alpha = 0.95$) for the difference in Party ID for the treatment and control groups.

b) Test the theory that the civics class changed Party ID.

c) Is it OK to treat this estimate as causal? Why or why not?

Treatment

Interval = $3.8 \pm 1.96 \times \frac{2.4}{\sqrt{288}}$

(3.52, 4.08)

Point Estimate = SD > 2.4

Control

Interval = $3.5 \pm 1.96 \times \frac{2.2}{\sqrt{242}}$

$3.5 \pm .277$

(3.22, 3.78)

Point est. = SD = 2.2

b) The theory that civics class changed party ID does not prove to be true. This is because there is not enough variance to show that the treatment was statistically significant.

c) It is not okay to treat this estimate as causal due to the fact that changes in party ID in the treatment group were no significant enough to warrant this as a causal relationship.