STA220 Practice Problems
Comparing Two Groups Module

1. The Salk polio vaccine trial was carried out in 1954. The table below shows the incidence of polio for 400,000 participating children, half of whom received the vaccine and half who did not.

	Polio victim?	
	Yes	No
Placebo	142	199,858
Salk vaccine	56	199,944

   (a) Calculate a 95% confidence interval for the difference in the proportion of children who got polio between the placebo and vaccine groups.

   (b) How would your answer to part (a) change if you calculated a 95% confidence interval for the difference in the proportion of children who got polio between the vaccine and placebo groups? How would the interpretation of the confidence interval change?

   (c) Carry out a statistical test to assess the whether or not rates of polio differ between the placebo and vaccine groups.

   (d) Are the necessary conditions of the procedures you used in (a) and (c) satisfied? Why or why not?