4. Are the following simple random samples large enough so that you can use the normal approximation? Explain!

a) You roll a die 24 times and count the number of fours.

b) You take a random sample of 100 trees and look at the average height.

5. Below is the breakdown of ages in North and South America in 2003(in millions):

	0-19	20-64	65+	
North America	166	274	48	
South America	140	189	20	

If you choose one person at random,

a) find P(0-19)

b) find P(0-19 | South America)

c) Are the events 'North America' and '0-19' independent? Give the relevant probabilities.

6. The correlation between the per capita consumption of wine and the death rate from heart disease for 19 developed countries is -0.84.

a) As a follow up, suppose a researcher looks at the correlation between the amount of wine consumed and the death rate due to heart disease for 'counties'. Do you expect this correlation to be stronger or weaker than -0.84 (Note: a country will consist of many 'counties', so a country is a grouping of 'counties').

b) The correlation here is strong. Does this say that if the wine consumption of a country increases that the death rate from heart disease will change? Explain