Answers to online assignment

a)

$\bar{x} = 40.75 \qquad s = 6.5 \qquad n = 4 \qquad \alpha = 0.1$

$t_{\frac{\alpha}{2},n-1} = t_{0.05,3} = 2.353$

Confidence interval is

$(\bar{x} - t_{\frac{\alpha}{2},n-1}\frac{s}{\sqrt{n}},\ \bar{x}+t_{\frac{\alpha}{2},n-1}\frac{s}{\sqrt{n}}) = 40.75 \pm 7.64725$

b)

i) The polls are independent and identically distributed (i.i.d.)
ii) Each poll is a normal random variaible