4. The proportion of left-handed adults in a country is 10%
Freya believes that the proportion of left-handed adults under the age of 25 in this country is different from 10%
She takes a random sample of 40 adults under the age of 25 from this country to investigate her belief.

(a) Find the critical region for a suitable test to assess Freya's belief.
   You should
   - state your hypotheses clearly
   - use a 5% level of significance
   - state the probability of rejection in each tail

(4)

(b) Write down the actual significance level of your test in part (a)

(1)

In Freya's sample 7 adults were left-handed.

(c) With reference to your answer in part (a) comment on Freya's belief.

(1)