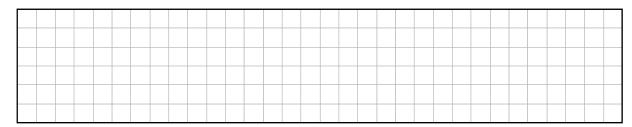**(b)** In September 2018 a European Commission report stated that it is considering a proposal to abolish daylight saving time. This would mean that the clocks would not go forward one hour in March and then not go back one hour the following October. A Transition Year class carried out a survey to find out local people's views on the proposal.

(i) The class surveyed a random sample of 800 people in the local area.
Find the margin of error of the survey.
Give your answer as a **percentage**, correct to 2 decimal places.

(ii) In the survey 350 people said they supported the EU proposal to abolish daylight saving time. Use your answer to **part (b)(i)** above to create a 95% confidence interval for the percentage of the population who supported the EU proposal.

(iii) A local newspaper had reported that 50% of people in the area supported the EU proposal. Use your answer to **part (b)(ii)** above to conduct a hypothesis test, at the 5% level of significance, to test the newspaper's claim. Clearly state your conclusion in the context of the question **and** give a reason for your conclusion.

Conclusion:

Reason: