2 **(a)** Given that a and b are real numbers, find a counterexample to disprove the statement that, if $a > b$, then $a^2 > b^2$. **[1]**

(b) A student writes the statement that $\sin x^\circ = 0.5 \iff x^\circ = 30^\circ$.

(i) Explain why this statement is incorrect. **[1]**

(ii) Write a corrected version of this statement. **[1]**

(c) Prove that the sum of four consecutive multiples of 4 is always a multiple of 8. **[3]**