

Name:..... Student Number:.....

Q1: Construct the truth table for the following statement: $\neg p \rightarrow [(p \wedge q) \rightarrow r]$. (4 marks)

Q2: Using logic laws, show that $[\neg(p \rightarrow q)] \wedge [q \wedge \neg r]$ is a contradiction. (3 marks)

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Q3: Use a direct proof to show that if $(m + n)$ and $(n + p)$ are even integers, where $m, n,$ and p are integers, then $(m + p)$ is even. (3 marks)

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