

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

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

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

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

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