"if  $x^2$  is greater than 9 then x must be greater than 3"

Determine whether or not this statement is true, giving a reason for your answer.

**(1)** 

**14.** (i) A student states

(ii) Prove that for all positive integers n,

(ii) Frove that for all positive integers n,  $n^3 + 3n^2 + 2n$ 

 $n^3 + 3n^2 + 2n$ 

is divisible by 6