Q1.

In the formula $T = (n - 6)^2 + 1$ n is a positive integer.

(a) Kim says,

"The value of T is always greater than 1
because $(n - 6)^2$ is always greater than 0"

Comment on her statement.

.....

.....

.....

(1)

(b) What is the only value of T that is a square number?

Answer .....

(1)
(Total 2 marks)

Q2.

The n^{th} term of the linear sequence

2 7 12 17 ... is $5n - 3$

A new sequence is formed by squaring each term of the linear sequence and adding 1.

Prove algebraically that **all** the terms in the new sequence are multiples of 5 .

.....

.....

.....

.....

.....

.....

.....

.....

(Total 4 marks)