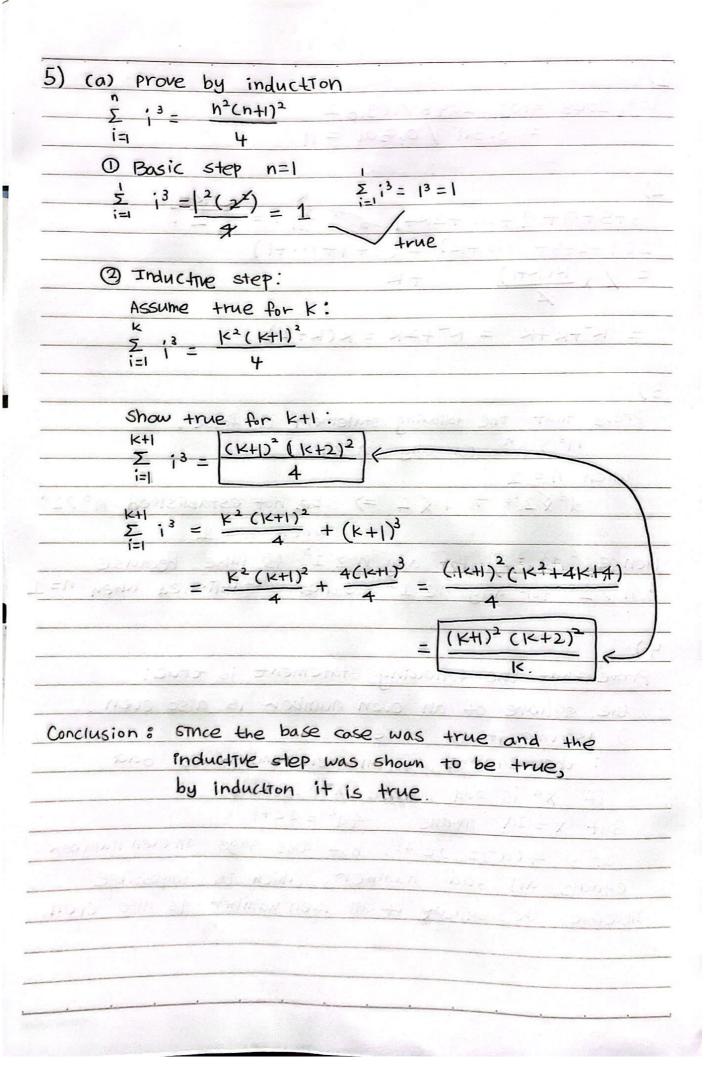
```
1)
 109, 2048 = 109,0 2048/109,02
          = 3.311 / 0.301 = 11
2)
  3+5+7+9+111+2K+167 = +=
 2(1+2+3+ 111+12) + (1+1+11+1)
 = y x K(KH) +K
  = K2+K+K = K2+2K = K(K+2)
3)
  Prove that the following statement is false:
       n3 > 2" for any n 21 1 1 (1)
  when n=1
       3 (212 -) 1 (2 => obe not established n3 >2"
                     ( when n = 1
Hence, 'n3 > 2" for any n z 1° is false because
 6 n3) 2" for any n2 13 is not established when n=1
      でしますしょう(はん)
4)
 prove that the following statement is true:
   the square of an even number is also even
   assume it is false
     : the square of an even number is odd
     if x2 is odd, then x2= 2C+1
   But x = 20 means 40^2 = 20 + 1
   So 3 4(a2)= 2c+1, but this says an even number
   equals an odd number, which is impossible
  Therefore, the square of an even number 1s also even.
```



(b) Prove by Induction	
n²-n is even for any n≥1	
① Basic Step $n=1$ $1-1=0 \Rightarrow 0 \text{ is even}.$	
2 Inductive Step	
Assume true for $k$ . $k^2-k \Rightarrow even$ .	
Show true for $kH$ . $(KH)^2 - (KH) = K^2 + 2K + 1/2K + 1$	
$= K^2 + K = K^2 - K + 2K$	
12-k is even and 2k is even	
so, K2-k+2k is also even,	
conclusion : since une base case was true	
and the inductive step was shown to be trues by induction it is true.	2.72
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