MATH4350
Homework Assignment

Joel Savitz

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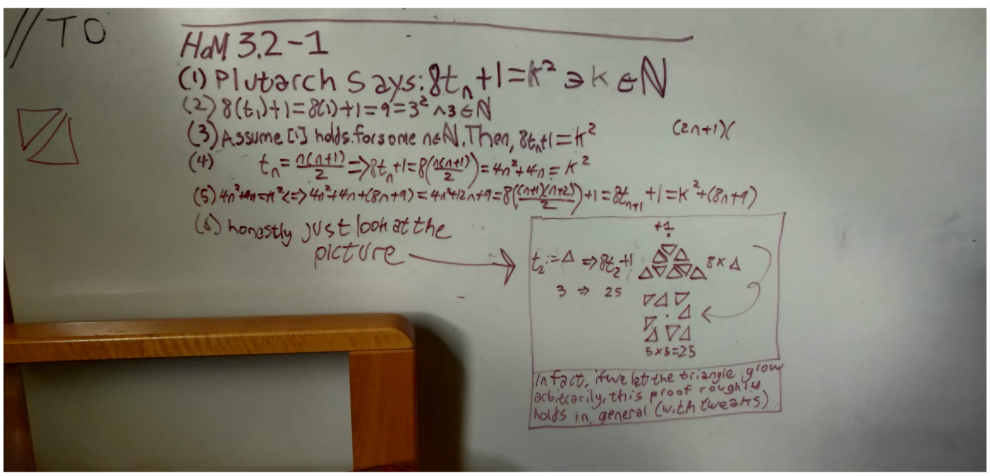
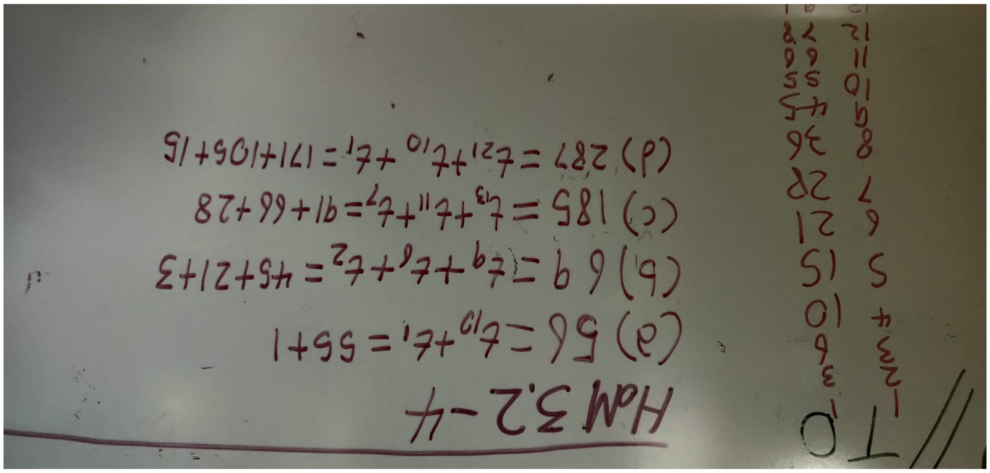
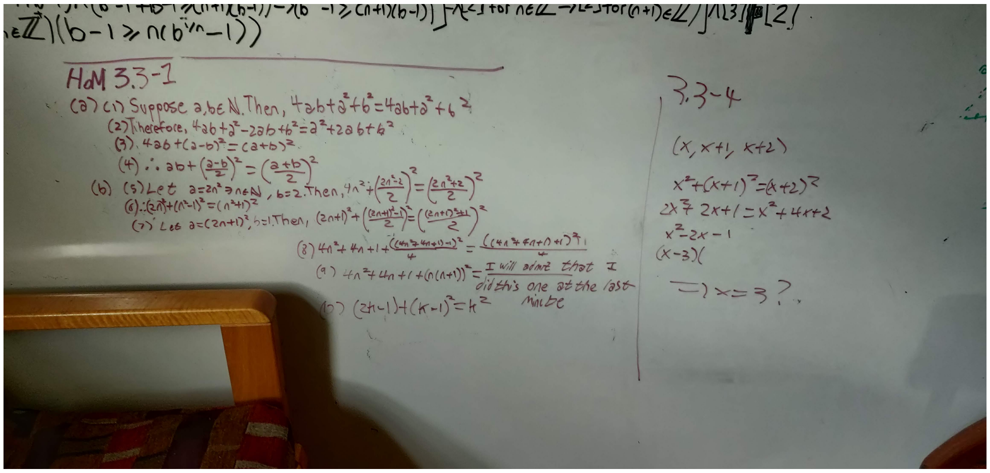
3.2-1



3.2-4


3.2-4
(a) 56 = t10 + t1 = 55+1
(b) 69 = t9 + t6 + t2 = 45+21+3
(c) 185 = t13 + t11 + t7 = 91+66+28
(d) 287 = t21 + t10 + t1 = 171+105+15
T D
1 1
2 3
3 6
4 10
5 15
6 21
7 28
8 36
9 45
10 55
11 66
12 78

3.3-1 and 4



HaM 3.3-1
(a) (1) Suppose a,b ∈ N. Then, 4ab+a²+b²=4ab+a²+b²
(2) Therefore, 4ab+a²−2ab+b²=a²+2ab+b²
(3) 4ab+(a−b)²=(a+b)²
(4) ∴ ab+((a−b)/2)²=((a+b)/2)²
(b) (5) Let a=2n² ∋ n∈N, b=2. Then, 4n²+((2n²−2)/2)²=((2n²+2)/2)²
(7) Let a=(2n+1)², b=1. Then,
I will admit that I did this one at the last minute
(10) (2k−1)+(k−1)²=k²
3.3-4
(x, x+1, x+2)
x²+(x+1)²=(x+2)²
2x²+2x+1=x²+4x+2
x²−2x−1
(x−3)(
=) x=3?