Algebra 23 Iterative Equations

Example 1

 Un = 2(3n) – 5(2n)

1. Verify that:

U3 – 5U2 + 6U1 = 0

1. Find Un + 1 and Un + 2
2. Investigate if:

Un + 2 – 5Un+ 1 + 6Un = 0 \

Example 2

 Un + 2 = Un+ 1 - 3Un

U1 = -2 U2 = -4. Find U6

Question 1

Un = 600(2n) – 7(5n)

Verify that

Un+2 -7Un+1 + 10Un  = 0

Question 2

Un = (n - 20)2n

Verify that

Un+2  - 4Un+1 +4Un = 0

Question 3

Un+2 = $\frac{2U\_{n}}{U\_{n+1}}$

U1 = 8 U2 = -4. Find U5