Assignment 10 (4/29)

psst...

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Problem 1

You don't have to submit these, but do try them on your own if possible. Problems $11.2.(1-8)$.

Problem 1

Problems $11.2.(17, 22, 31, 37, 42)$.

Problem 2

Try to guess an explicit formula for the n-th term and prove by induction:
Problems $11.2.(46, 52, 55, 61)$.

Problem 3

Problems $11.2.(67(a, b), 68(a, b))$. For each of these, guess the lub (No need to prove).

Problem 4

You do not have to submit solution to this. However, submitting correct solution will earn you a chocolate!

Give an explicit formula for the n-th term of the sequence defined recursively as follows:

$$a_1 = 2, \quad a_2 = 4, \quad a_n = 2a_{n-1} + 3a_{n-2}, n \geq 3$$