

Name: _____

Date: _____

Jason is planning to swim in a charity swim-a-thon. Several relatives have agreed to sponsor him in this charity event. Each of their donations is explained below.



Grandfather: I will give you \$1 if you swim 1 lap, \$3 if you swim 2 laps, \$5 if you swim 3 laps, \$7 if you swim 4 laps, and so on.

Father: I will give you \$1 if you swim 1 lap, \$3 if you swim 2 laps, \$9 if you swim 3 laps, etc.

Aunt June: I will give you \$2 if you swim 1 lap, \$3.50 if you swim 2 laps, \$5 if you swim 3 laps, and so on.

Uncle Bob: I will give you \$1 if you swim 1 lap, \$2 if you swim 2 laps, \$4 if you swim 3 laps, \$8 if you swim 4 laps, and so on.

1. Complete the table for each sequence below.

Grandfather's Plan	# of Laps	1	2	3	4	5	6	7	8	9	10
	Donation	\$1	\$3	\$5	\$7						
Father's Plan	# of Laps	1	2	3	4	5	6	7	8	9	10
	Donation	\$1	\$3	\$9							
Aunt June's Plan	# of Laps	1	2	3	4	5	6	7	8	9	10
	Donation										
Uncle Bob's Plan	# of Laps	1	2	3	4	5	6	7	8	9	10
	Donation										

2. For each plan, decide whether it creates a **geometric** or **arithmetic** sequence, a **linear** or **exponential** function, has a **common ratio** or **common difference**, and write a **recursive equation** to represent the table.

Grandfather's Plan arithmetic Father's Plan _____

$$a_n = a_{n-1} + 2$$

linear
c.d. = 2

Uncle Bob's Plan _____ Aunt June's Plan _____