

Determine whether each of the following data tables determines a linear relationship or not. For those that are linear, write a function model. Explain your reasoning.

1. Suppose you are planning to mow lawns as a summer job. Evidence shows that the area remaining to be mowed is related to the time mowed. Suppose also that you begin with a lawn covering 12,00 square feet.

t	0	5	10	15	20	25	30	35	40
Area remaining	12000	10500	9000	7500	6000	4500	3000	1500	0

2. Suppose you place one grain of rice on the corner of a checkerboard, then two grains of rice on the next square, then 4, then 8, etc.

square #	1	2	3	4	5	6	7	8	9
Pieces of rice	1	2	4	8	16	32	64	128	256

3. You throw a ball upward from a height of 20 feet.

time	0	0.5	1	1.5	2	2.5	3	3.5	4
height	20	48	68	80	84	80	68	48	20

4. Your friend has a job with a starting salary of \$35,000 and a \$500 raise every year.

years on the job	0	1	2	3	4	5	6
salary	\$35,000	\$35,500	\$36,000	\$36,500	\$37,000	\$37,500	\$38,000