

Applying Arithmetic Sequences

1. Ileana is planning a trip to Spain. She is saving her money. Her bank statement is shown below.

DIXON STATE BANK	
Laniqua Jones	Account Number 922194075
Current Balance as of 03/01/2019	\$ 690
Balance as of 02/01/2019	\$ 635
Balance as of 01/01/2019	\$ 580
Starting Balance as of 12/01/2018	\$ 525
— End of Statement	

$$d: 55$$

$$a_1: 525$$

- a. Create a function to represent this sequence.

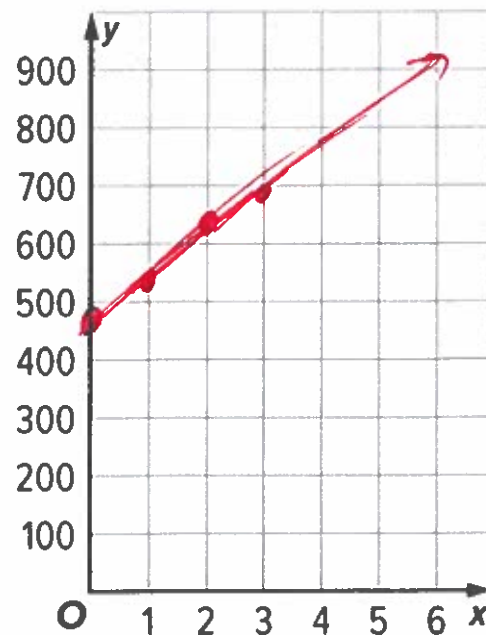
$$a_n = 525 + 55(n-1)$$

$$\underline{525 + 55n - 55}$$

$$a_n = a_1 + (n-1) \cdot d$$

$$a_n = 55n + 470$$

- b. Graph the function.



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2. Beau is having his car repaired after an accident. The body shop has a sign displaying the cost of labor.



Labor Rates

1st Hour	\$140
2nd Hour	\$205
3rd Hour	\$270
4th Hour	\$335
5th Hour	\$400
6th Hour	\$465

$$a_1: 140$$

$$d: 65$$

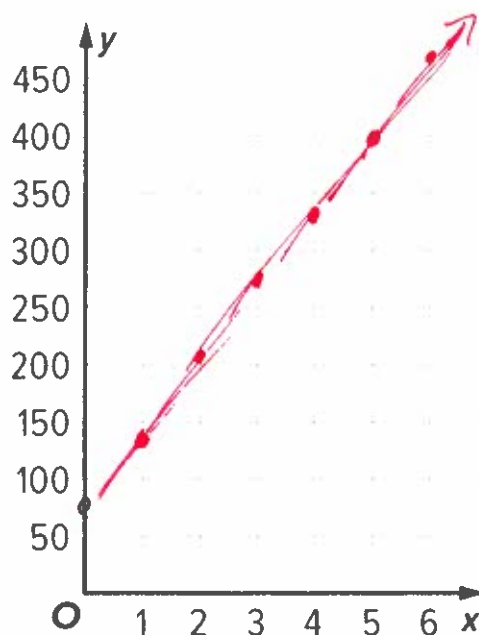
- a. Write a function to represent the sequence.

$$a_n = 140 + 65(n-1)$$

$$140 + 65n - 65$$

$$a_n = 65n + 75$$

- b. Graph the function.



$$a_n = a_1 + (n-1)d$$