

NAME: _____

UNIT 3 • LINEAR AND EXPONENTIAL FUNCTIONS

Lesson 8: Arithmetic and Geometric Sequences

Problem-Based Task 3.8.1: New Tablet

You are saving money so you can buy a new tablet computer. The tablet costs \$450. Your grandparents gave you \$50 for your birthday. Before that \$50 gift, you didn't have any money saved. You have a babysitting job and plan to save \$10 each week. Write an arithmetic sequence to represent this scenario. In how many weeks will you have saved enough money to buy the tablet?

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Coaching

- a. How much money do you have to start with?

- b. How much money do you plan to save each week?

- c. How much money will you have after 1 week? 2 weeks? 3 weeks?

- d. Does the amount of money you will have at the end of each week form an arithmetic sequence?
How do you know?

- e. Write the explicit form of the arithmetic sequence.

- f. How much money do you need to save to buy the tablet?

- g. Use the formula to find how many weeks it will take to save enough money to buy the tablet.