

Name _____

3-7B Lesson Master

Questions on SPUR Objectives

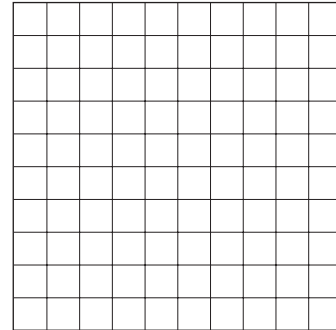
See Student Edition pages 215–219 for objectives.

USES Objective L

1. Jon opened a savings account when he received his first pay check. He started with a deposit of \$50 and then deposited \$20 each week.

- a. Write a recursive formula to describe this situation.
Graph the first 6 terms at the right.

- b. How much had Jon deposited after 10 weeks?

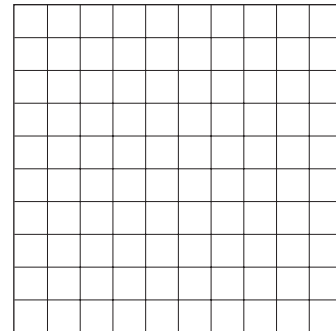


2. At the beginning of each year after he retired, Oscar Anderson sold one 40-acre parcel from his 400-acre farm for income.

- a. Write a recursive formula to describe this situation.
Graph the first 6 terms at the right.

- b. How many acres were left at the beginning of the fifth year?

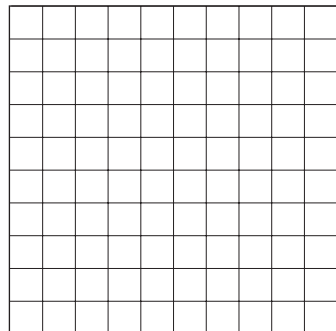
- c. When will Oscar have fewer than 100 acres on his farm?



3. Debbie has 520 books in her library. Each year she buys an average of 50 new books.

- a. Write a recursive formula that gives the number of books b_n in Debbie's library in year n . Graph the first 6 terms at the right.

- b. How many books will Debbie have in her library ten years from now?



Name _____

3-7B

page 2

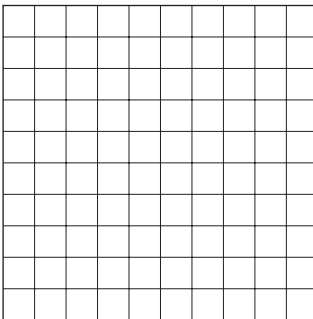
In 4–6, use this information: Sara Kim was offered two jobs with a starting salary of \$30,000. NA Publishing promised a raise of at least 4.5% every year, and Gary Press promised annual raises of at least \$1500.

4. Write a recursive formula to describe the salary plan.
- a. of NA Publishing. _____ b. of Gary Press. _____
5. After how many years would Sara’s salary reach at least \$36,000
- a. at NA Publishing? _____ b. at Gary Press? _____
6. Which company’s annual salary would be higher after 10 years? _____

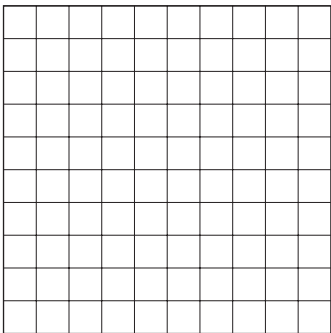
REPRESENTATIONS Objective N

In 7–10, graph the first six terms of the sequence defined by the recursive formula. The formula is given for integers $n \geq 2$.

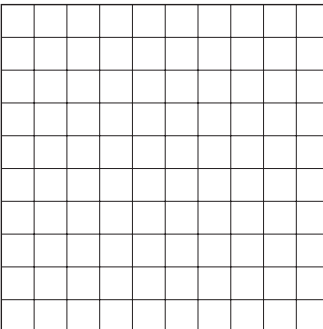
7.
$$\begin{cases} d_1 = -4 \\ d_n = 8 - d_{n-1} \end{cases}$$



8.
$$\begin{cases} e_1 = 2 \\ e_n = 1 \div e_{n-1} \end{cases}$$



9.
$$\begin{cases} x_1 = 1 \\ x_n = 3x_{n-1} + 1 \end{cases}$$



10.
$$\begin{cases} m_1 = 3 \\ m_n = 3m_{n-1} \end{cases}$$

