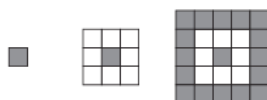


LESSON 6.2 Assignment

Name _____ Date _____

This Is Series(ous) Business
Finite Arithmetic Series

1. Jill is laying 1 foot by 1 foot tiles that each have 1 gray side and 1 white side in a room that measures 25 feet by 25 feet. She lays a gray tile in the center of the room. Next, she lays a ring of white tiles around the center tile. Then, she lays a ring of gray tiles around the white tiles and continues the pattern in this manner. The first 3 steps in her pattern are shown.



- a. Determine the pattern in the number of tiles added in each ring.
- b. Write an explicit formula to represent the number of tiles added in ring n .
- c. Determine the number of tile rings that must be added around the center tile to completely fill the room's floor. Explain your reasoning.

LESSON 6.2 Assignment

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- d. Determine the number of tiles needed to completely cover the floor. Explain your reasoning.
- e. Jill only has enough money to buy 400 tiles. She decides to lay as many complete rings around the center tile as she can. How many complete tile rings can Jill lay with 400 tiles? Of the 400 tiles, how many tiles will Jill use if she only lays complete rings?

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