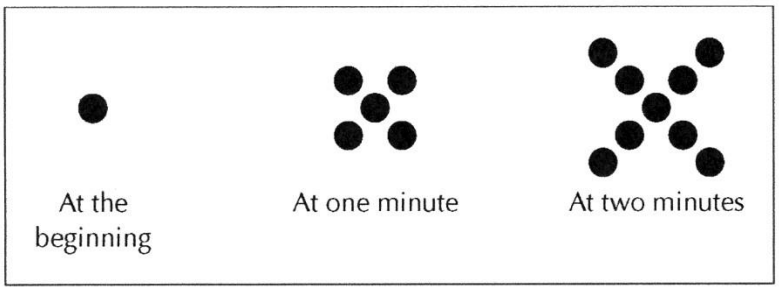
Unit 3 Day 1 - Sequences #1 Classwork Name: _____



1. Describe the pattern that you see in the sequence of figures above. Be sure to include any information about how the pattern is changing.

2. Assuming the sequence continues in the same way, how many dots are there at 3 minutes? Explain in words how you found your answer.

3. If there are 401 dots after 100 minutes, how many dots would there be after 103 minutes? Explain in words how you found your answer.

4. Draw a sequence that has 5 dots at the beginning, then continues in the same pattern as the sequence above. Describe the pattern.

5a. Write a recursive formula that describes the first sequence.

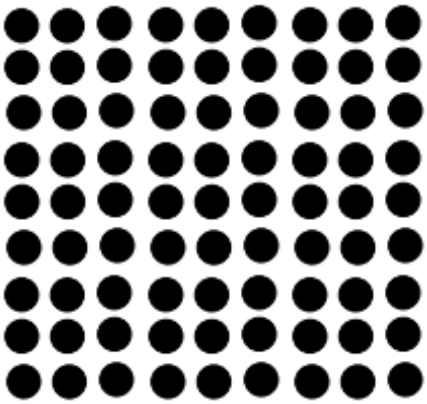
5b. Write a recursive formula that describes the sequence in #4.

At the Beginning

At one minute

At two minutes

At three minutes



At four minutes

6. Describe and show in the picture the pattern of change that you see in the above sequence of figures.

7. Assuming the pattern continues in the same manner, how many dots would there be after five minutes? Explain how you figured out the number of dots.

8a. Describe the similarities between the sequence on the front page and the one above.

8b. How are the sequences different?

9. Write a recursive formula for the sequence at the top of this page.