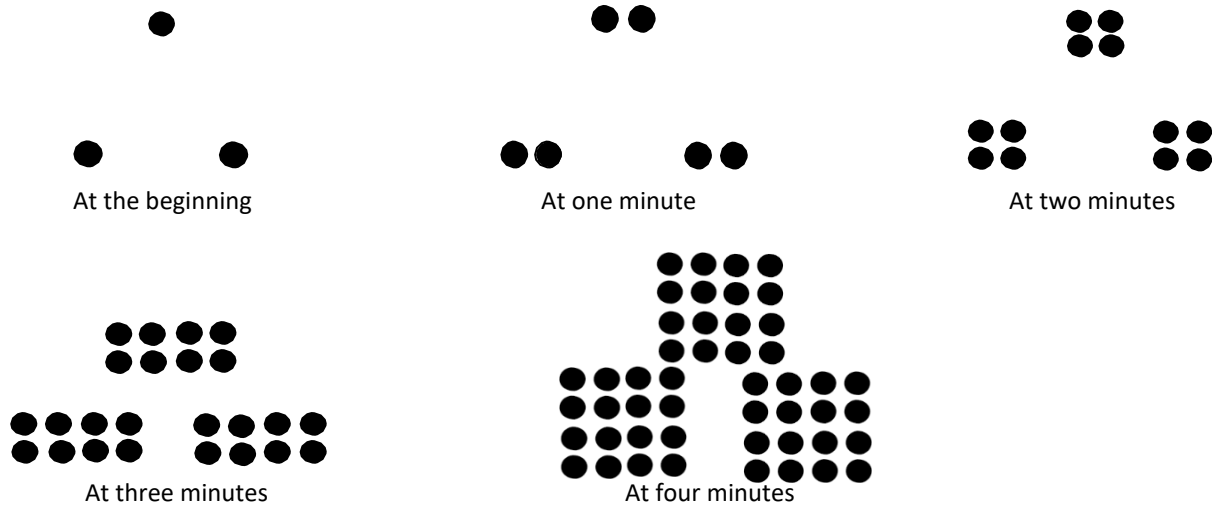


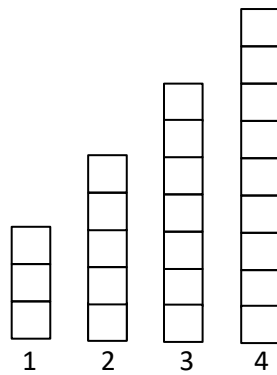
Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Unit 2 Day 2 – Arithmetic vs. Geometric Sequences Classwork



1. Describe and show in the picture the pattern of change you see the above sequence of figures.
2. Assuming the sequence continues in the same way, how many dots are there at 5 minutes?
3. Assuming the sequence continues in the same way, how many dots are there at 15 minutes?
4. Write a recursive formula to describe how many dots there will be after  $x$  minutes.
5. Is this sequence arithmetic or geometric? How do you know?

Scott's Workout – Scott has decided to add push-ups to his daily exercise routine. He is keeping track of the number of push-ups he completes each day in the bar graph below, with day one showing he completed three push-ups. After four days, Scott is certain he can continue this pattern of increasing the number of push-ups he completes each day.



- How many push-ups will Scott do on day 6?
- How many push-ups will Scott do on day 45?
- Write a recursive equation to model the number of push-ups Scott will complete on any given day.
- Is this an arithmetic or geometric sequence? How do you know?
- Ally is also including push-ups in her workout and says she does more push-ups than Scott because she does fifteen push-ups every day. Is she correct? Explain.