

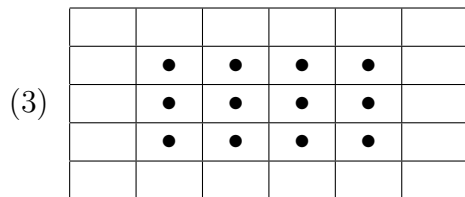
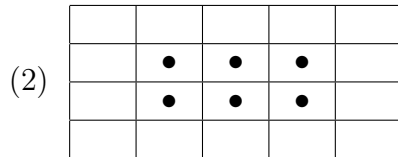
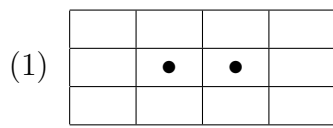
Patterns

1. In the pattern of dots below, the first four figures are given. How many dots are in the 9th figure?



How many in the 273rd?

2. Margie arranges tiles as shown. If she continues to make arrangements according to this pattern, how many dotted tiles will arrangement #9 have? How many plain tiles will arrangement #9 have? What about figure #30: how many dotted tiles and plain ones? Figure #100?



3. Each figure below contains a different number of *s. If the pattern continues, how many *more* *s will there be in Figure 52 than in Figure 49?



4. The decimal form of the fraction $1/7$ is $0.\overline{142857}$. What is the 250th decimal digit of $1/7$?

5. Write the next two letters that logically follow.

b Y d W f U h S _____

6. What is the next term in the sequence?

1, 2, 3, 6, 7, 14, 15, _____

Look at our Math League web-page for practice problems, helpful guides and other information.