Mathletes Problem of the Week #5

Dime Dimensions

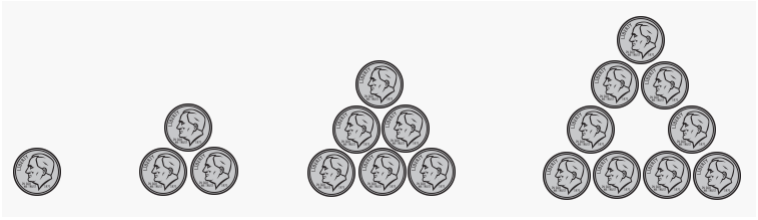

Figure 1 Figure 2 Figure 3 Figure 4

© Visual Patterns

Take a look at the growing pattern above. The first figure has 1 dime. In figure 2, some dimes have been added to make a triangle shape with two dimes on each side. In figure 3, some more dimes have been added so the triangle now has three dimes on each side. And in figure 4, some more dimes have been added so the triangle now has four dimes on each side. Imagine the figures keep getting larger in the same way.

a) What will figure 5, figure 6, and figure 7 look like and how many dimes will be in them?
b) What is the value in dollars of each of the figures from 1 to 7? How much would they be worth if they were made of quarters instead of dimes?
c) Imagine what figure 100 will look like. How many dimes will be in it and how much will it be worth?
d) What if we filled in the empty space in the middle of the triangles? Try answering the first three questions again but with this new version of the pattern.

Solutions & Explanations: (Try one or try them both! Record your solutions and explanations below and on the back.)

Name _____ **Class** _____

(First and last name, please!) **Solutions due: November 14th**