Problem 4

Examine the beginning of the code for a picture. Find the pattern and add another line of code.

→1  ↓2  ←3  ↑4
→5  ↓6  ←7  ↑8
→9  ↓10  ←11  ↑12

Draw the picture starting at the point marked “4” on the handout.

Can you imagine what the picture will look like if you continue the pattern?
Problem 5

Two grasshoppers start to hop from the same point “4”.

1. The first grasshopper hops $\rightarrow 9$ and stays there. The second grasshopper hops following the path on picture 4 (one hop right, then one hop down, then one hop left, and so on)
   a. Will the grasshoppers ever meet?
   b. Will the second grasshopper hop OVER the first one?

2. What if the first grasshopper hops $\rightarrow 10$ instead of $\rightarrow 9$? Answer questions 1.a and 1.b.

3. What if the first grasshopper hops $\rightarrow 100$ instead of $\rightarrow 9$? Answer questions 1.a and 1.b.

4. What if the first grasshopper hops $\rightarrow 111$ instead of $\rightarrow 9$? Answer questions 1.a and 1.b.
Problem 6

Tom paid $6 for 18 buns on Monday. On Tuesday, he needs to buy 6 more buns than on Monday. How many dollars will he pay?