Coded pictures

Draw coded pictures on graph paper starting with a dot on the grid intersection and following the instructions below.

For example: ↓1 ↘2 means that one has to draw a line going down one box of the grid, and then continue drawing diagonally down-right across two boxes.

Problem 1 (Start at the point marked "1" on the handout grid)

↗1	→1	↓2	→3	↙2	←1
↓1	↘1	←3	↗1	↑1	←1
↖2	→3	↑1	←1		

Problem 2 (Start at the point marked "2" on the handout grid)

→1	↓1	←3	↘2	→1	↓1
↙1	→3	↖1	↑1	→1	↗2
←3	↑2	←1	↙1		

Problem 3

A wicked witch grabbed Hermione Granger and took her to the witch's cabin. Hermione remembered the path to the cabin but she had no graph paper to draw it:

↘2 ↑1 →2 ↓2 ←4 ↑1 →1

Give Hermione the code for the return trip to the school without drawing the path.

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 in your notebooks starting at the center of the page.

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