

Name _____ Date _____

Series with rules



1. The Council of Moggy has to employ more cats to carry out big projects in the new year. They decide to double the number of workers plus three extra each week. Complete this table to show how many cats are employed each week in total.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
2	7	17							

2. The Moggy workers are not very honest cats, and their tools keep disappearing. In week 1, there were 90 tools. In week 2, eighteen tools were lost. But each week, two less tools are lost. Complete the table to show when they will have no tools.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10

3. Because of the lost tools, the working cats of Moggy are paid a little less each week. Study this table and decide how their boss works out how to pay them.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
£343	£325	£309	£295	£283	£273	£265	£259	£255	£253

4. Each day, the cats are arranged in teams. Use the table in Question 1 to complete this table. Discuss the patterns formed.

	W1	W2	W3	W4	W5	W6	W7	W8
(a) number left out when in teams of 3								
(b) number left out when in teams of 4								
(c) number left out when in teams of 5								
(d) number left out when in teams of 6								
(e) number left out when in teams of 7								