1. Consider the following diagram:

Any number in the diagram which is connected to four other number must be equal to their average:

Which number should be written inside the circle marked by "?"?
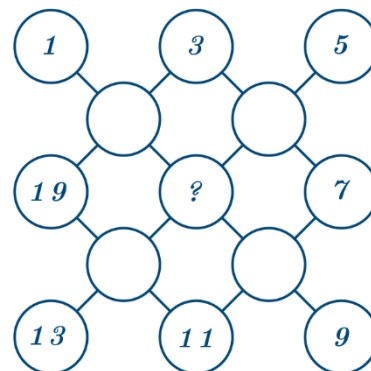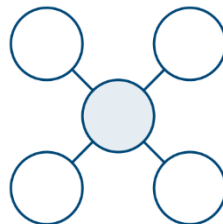
Note: an average of 4 numbers is their sum divided by 4.

2. 13 persons who always tell the truth and 12 persons who always lie took part in a survey. As part of the survey, each person was asked about each of the 25 persons (including themselves) whether that person speaks the truth. How many "yes" answers were given in total?

3. In the following figure there is an orange lane around the blue square. The total area of the orange lane in 44% of that of that of the blue square. What is the ratio (percentage) between the width of the lane and the edge of the square?
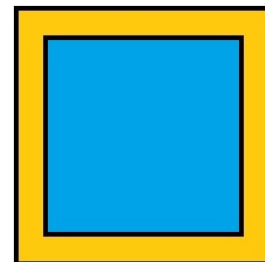
4. Yossi wrote on the board two-digits composite number (not prime). He wants all the number written on the board to be co-prime to one another. How many numbers could Yossi write on the board at most?

Note: two integer numbers are called co-prime to one another if they do not share any common factor expect the number 1.

5. On a street there are 15 houses in a row, each either red, blue or green. There is at least one house of each color. Between every two blue houses there is a red one. Between every two green houses there is a blue one. What is the maximal possible number of green houses in the street?

6. We would call a fraction "magical" if both its numerator and its denominator are smaller than 10. For example: $\frac{1}{9}$ is "magical", $\frac{6}{8}$ is "magical", but $\frac{3}{14}$ is not "magical". How many "magical" fractions that are greater than one half and lesser than one are there?

Good luck!