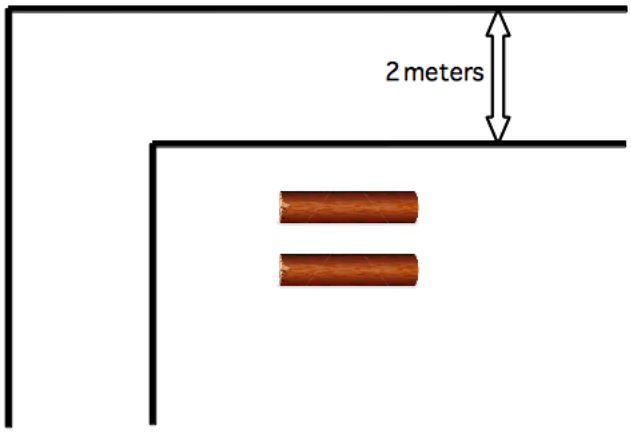
Problem Solving
Early Elementary, meeting 5 Winter 2012

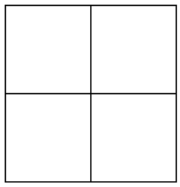
2/12/12

Kate and John need to cross the river in the picture below:

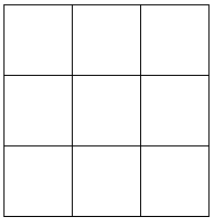


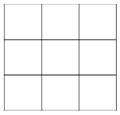
The river is 2 meters wide. The children have 2 logs. Each log is exactly 2 meters long. Can you build a bridge so that they can cross safely? Draw it on the picture.

1. How many squares are there in the picture below?



2. Same for:



Type of Square	Number of such squares
	
	
	

TOTAL NUMBER OF SQUARES:

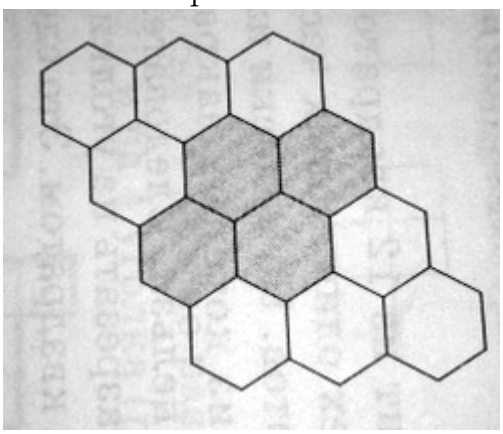
3. Insert the missing digits:

$$\begin{array}{r} 2\ 3 \\ +\ \square\ \square \\ \hline 6\ 8 \end{array} \qquad \begin{array}{r} \square\ 7 \\ +\ 8\ \square \\ \hline 9\ 9 \end{array}$$

$$\begin{array}{r} \square\ 9 \\ +\ \ \ \square \\ \hline 4\ 2 \end{array} \qquad \begin{array}{r} \square\ 8 \\ +\ 2\ \square \\ \hline 4\ 1 \end{array}$$

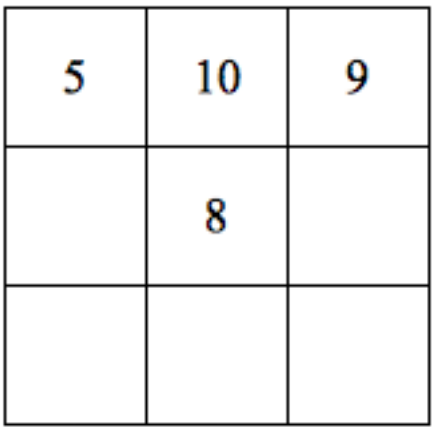
4. Cut the shape below into 4 pieces so that:

- all the pieces are the same in size;
- all the pieces have the same shape;
- each of the pieces contains one shaded square;



5. A square filled with numbers is *magic* if the sums of the numbers in any column, row or diagonal are the same.

   Fill in the numbers 4, 6, 10, 11 and 12 so that the square below is magic.



6. Cory has 10 more books than Lauren. Cory gave Lauren 3 books. How many more books does Cory have now?