## In a box there are three smaller boxes, each one of which contains three even smaller boxes. How many boxes are there in total?

## (A) 9 (B) 10 (C) 12 (D) 13 (E) 15

by Julie Roy

Problem Solving Questions C

There is a house on each corner of the streets. The houses are shown on the map. Two new houses will be built on each street between the corner houses. How many houses will there be in all?

(A) 8 (B) 12 (C) 16 (D) 20 (E) Other answer

In a game it is possible to make the following exchanges:


Adam has 6 pears. How many strawberries will Adam have, when he trades all his pears for just strawberries?
(A)12 (B)36 (C)18 (D)24 (E)6

Problem Solving Questions C
by Julie Roy

Sophie makes a row of 10 houses with matchsticks. In the picture you can see the beginning of the row. How many matchsticks does Sophie need altogether?

(A)50 (B)51 (C)55 (D)60 (E)62

Problem Solving Questions C by Julie Roy

## A square box is filled with two layers of identical square pieces of chocolate. Kirill has eaten all 20 pieces in the upper layer, which are along the walls of the box. How many pieces of chocolate are left in the box?

## (A)16 (B)30 (C)50 (D)52 (E)70

Problem Solving Questions C

by Julie Roy

In a park there are babies in four-wheel strollers and child
wheel bikes. Paula counted wheels and the total was 12
added the number of strollers to the number of bikes, the
How many two-wheel bikes are there in the park
(A) 1 (B) 2 (C) 3 (D) 4 (E) Other number
Problem Solving Questions C by Julie Roy

Mary has 13 flowers, five of which are roses. The rest are tulips. Six of the flowers are white, and the remaining flowers are red. At least how many tulips are red?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

A ship was attacked by pirates. One by one they climbed a long rope ladder to get to the ship. The pirate captain was in the middle. If the captain was the eighth pirate to get on the ladder, then how many pirates were there on the ladder?
(A) 7 (B) 8 (C) 12 (D) 15 (E) 16

Basil attached five stickers with the digits 1, 2, $3,4,5$ in some order on a sheet of paper as shown in the picture.

## 12345

In what order could Basil have put the stickers?
(A) $1,2,3,4,5$ (B) $4,5,2,1,3$
(C) $5,4,3,2,1$ (D) $2,3,4,1,5$ (E) $4,1,3,2,5$

Problem Solving Questions C
by Julie Roy

Which year is the next year after the current year, 2016, that is written with the same digits 0 , 1,2 and 6 ?
(A) 2106 (B) 1206 (C) 2601 (D) 2061 (E) 2160

## Which structure is built using 10 cubes?

(A)

(B)

(C)

(D)

(E)


Problem Solving Questions C
by Julie Roy

Thirteen friends shared two pizzas. Each pizza was cut into eight slices. If everyone ate a slice, how many slices remained?
(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

Problem Solving Questions C

Sophie is arranging black and white marbles following the pattern shown in the picture.


How will the marbles appear on the top level where the question mark? is located?
(A)
(B)
(C) $00 e 000$
(D) $e^{\circ}$
(E)

Problem Solving Questions C
by Julie Roy


Lisa put six eggs of white or brown colour in the shown box. Two brown eggs cannot be next to each other. At most, how many brown eggs could Lisa put in the box?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

Problem Solving Questions C
by Julie Roy

Amy wants to build a larger square from small square tiles. She already glued six tiles as shown.


At least how many more tiles does she need? (A) 6 (B) 8 (C) 9 (D) 10 (E) 12

## Which picture cannot be made by using only shapes like


(A)

(B)

(C)

(D)

(E)


Problem Solving Questions C
by Julie Roy

Five dragons named Dodo, Pepe, Ritchi, Buro and Fifi lived each in his own cave.


Dodo and Pepe had only one neighbour. Ritchi lived in the cave with a triangle. Buro did not have a tree in front of his cave. Pepe lived next to Buro. Which cave did Fifi live in?
(A)


(D) $\triangle$


Problem Solving Questions C

Looking at the picture below
find the number in the lower right corner of the table.

(A) 1 (B) 2 (C) 3
(D) 4 (E) 5

Problem Solving Questions C
by Julie Roy

Each of the 4 keys fits only one of the 4 padlocks and the numbers on the keys refer to the letters on the padlocks.


What is written on the last padlock?
(A) GDA (B) ADG (C) GAD (D) GAG (E) DAD

Problem Solving Questions C

Now it is half past one o'clock
 hours ago?

Problem Solving Questions C
(D)

(E)
by Julie Roy

Ann put six toys in a shelf with six boxes as shown.


When you look at the shelf, you see that:


Which toy is in the upper right box?
$(\mathrm{A})^{2-8}$
(B)
(C) $\stackrel{8}{=}$
(D) ${ }^{n}$
(E)
by Julie Roy

