



NAME \_\_\_\_\_ CLASS \_\_\_\_\_

**Points:** \_\_\_\_\_ **Kangaroo leap:** \_\_\_\_\_

Separate this answer sheet from the test.

Write your answer under each problem number.

For each wrong answer,  $1/4$  of the points of the problem will be deducted.

If you don't want to answer a question, leave the space empty and no deduction will be made.

PROBLEM	1	2	3	4	5	6	7
ANSWER							

PROBLEM	8	9	10	11	12	13	14
ANSWER							

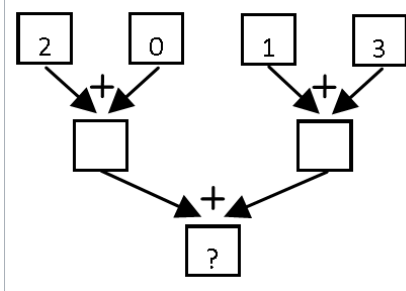
PROBLEM	15	16	17	18	19	20	21
ANSWER							



3 points

1.

We put 2, 0, 1, 3 in an adding machine. What is the result in the box with the question mark?



(A) 2

(B) 3

(C) 4

(D) 5

(E) 6

2.

Nathalie wanted to build the same cube as Diana had (figure 1). However, Nathalie ran out of small cubes and built only a part of the cube, as you can see in the figure 2. How many small cubes does Nathalie need to complete her figure?

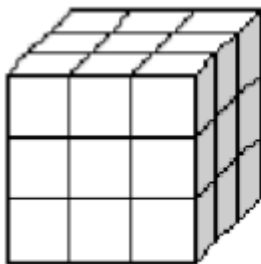


Figure 1

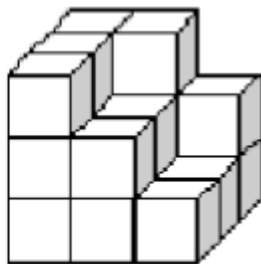


Figure 2

(A) 5

(B) 6

(C) 7

(D) 8

(E) 9

3.

Nick is learning to drive. He **knows** how to turn right but **cannot** turn left. What is the smallest number of turns he must make in order to get from A to B?

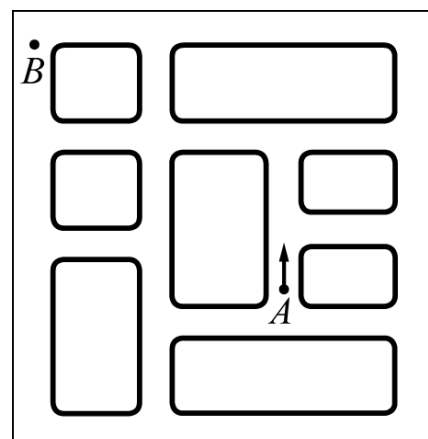
(A) 3

(B) 4

(C) 6

(D) 8

(E) 10





4.

The sum of the ages of Ann, Bob and Chris is now 31 years. What will the sum of their ages be in three years?

- (A) 32                      (B) 34                      (C) 35                      (D) 37                      (E) 40

5.

What digit must be placed in the boxes (same digit in all of them), in order to make the multiplication correct?

$$\square\square \cdot \square = 176$$

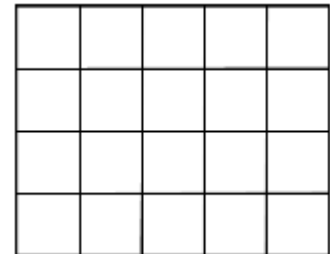
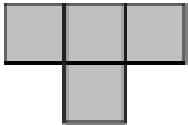
- (A) 6                      (B) 4                      (C) 7                      (D) 9                      (E) 8

6.

The number 36 has the property that it is divisible by the digit in the unit position, because 36 is divisible by 6. For example, the number 38 does not have this property. How many integers between 20 and 30 have this property?

- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

7.



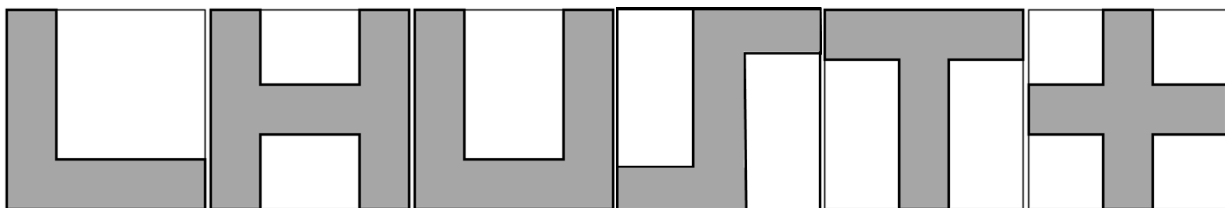
Ann has a lot of pieces like the one in the picture above. She tries to put as many as possible in the rectangle on the right. The pieces may not overlap each other. What is the **largest** possible number of pieces Ann can put in the rectangle?

- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

**4 points**

8.

Mary colours figures on square sheets of paper as shown below. How many of these figures have the same perimeter as the sheet of paper itself?



- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

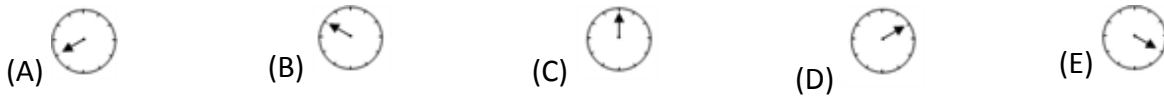


9.

Ann drives on her bicycle throughout the afternoon with constant speed. She sees her watch at the beginning and at the end with the following result:



Which picture shows the position of the minutes-arm when Ann finishes one third of the ride?



10.

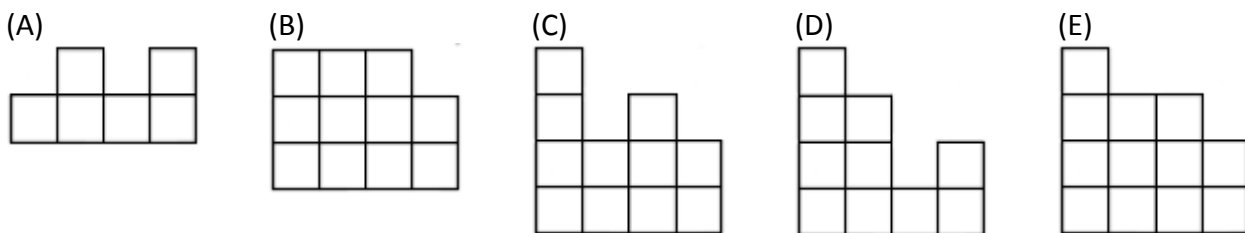
John has made a building of cubes.

**BEHIND**

4	2	3	2
3	3	1	2
2	1	3	1
1	2	1	2

**FRONT**

In the picture you see this building from above. In each cell you see the number of cubes in that particular tower. When you look at the building from the front, what do you see?



11.

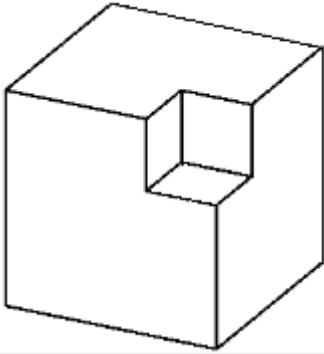
In an election each of the five candidates got a different number of votes. The candidates received 36 votes in total. The winner got 12 votes. The candidate in the last place got 4 votes. How many votes did the candidate in the second place get?

- (A) 8                      (B) 8 or 9                      (C) 9                      (D) 9 or 10                      (E) 10



**12.**

From a wooden cube with side 3 cm we cut out at the corner a little cube with side 1 cm (see picture).



What is the number of faces of the solid after cutting out such small cubes at each corner of the big cube? (Originally there were, of course, six faces.)

- (A) 16                      (B) 20                      (C) 24                      (D) 30                      (E) 36

**13.**

Find the number of pairs of two-digit positive integers whose difference is equal to 50. For example, 62 and 12 is such a pair.

- (A) 40                      (B) 30                      (C) 50                      (D) 60                      (E) 10

**14.**

The final of the local hockey championship was a match full of goals. After the first half, 6 goals had been scored, and the guest team was leading. The home team shot 3 goals in the second half, and they won the game. How many goals did the home team score altogether?

- (A) 3                      (B) 4                      (C) 5                      (D) 6                      (E) 7

**5 points**

**15.**

40 boys and 28 girls stand in a circle, hand in hand. Exactly 18 boys give their right hand to a girl. How many boys give their left hand to a girl?

- (A) 9                      (B) 14                      (C) 18                      (D) 20                      (E) 28



16.

Aron, Bern and Carl always lie. Each of them owns a red stone or a green stone. Aron says: "My stone is the same color as Bern's stone." Bern says: "My stone is the same color as Carl's stone." Carl says: "Exactly two of us own red stones." Which of the following statements is true?

- (A) Aron's stone is green.
- (B) Bern's stone is green.
- (C) Carl's stone is red.
- (D) Aron's stone and Carl's stone have different colours.
- (E) None of the above is true.

17.

66 cats signed up for the contest Miss Cat 2013. After the first round 21 were taken out, because they failed to catch mice. 27 cats out of those that remained in the contest had stripes and 32 of them had one black ear. All striped cats with one black ear got to the final. What is the minimum number of finalists?

- (A) 3
- (B) 7
- (C) 13
- (D) 14
- (E) 27

18.

There are four buttons in a row as shown below. Two of them show happy faces, and two of them show sad faces. If we press on a face, its expression turns to the opposite (e.g. a happy face turns into a sad face after the touch). In addition to this, the adjacent buttons also change their expressions to the opposite. What is the smallest number of times you need to press the buttons in order to make all faces happy?



- (A) 2
- (B) 3
- (C) 4
- (D) 5
- (E) 6

19.

How many different  $2 \times 2 \times 2$ -cubes can be constructed using 4 white and 4 black cubes? Two cubes are the same, if one can be obtained by rotating the other.

- (A) 16
- (B) 9
- (C) 8
- (D) 7
- (E) 6

