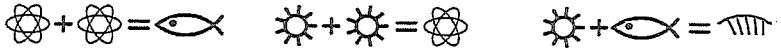
3.-4. třída, 2018, klokan

18. In an ancient writing the symbols  represent the numbers 1, 2, 3, 4, and 5. Nobody knows which symbol represents which number. We know that

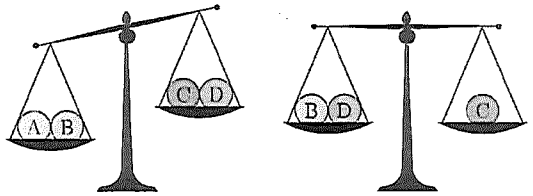


Which symbol represents the number 3?

(A)  (B)  (C)  (D)  (E) 

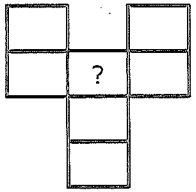
(A) Dina (B) Filip (C) Becca (D) Lisa (E) Paige

22. Four balls each weigh 10, 20, 30 and 40 grams. Which ball weighs 30 grams?



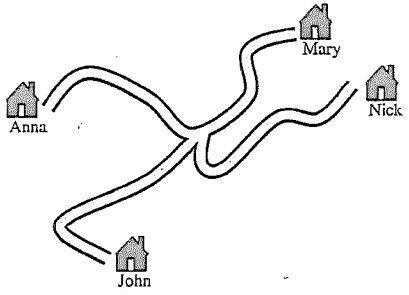
(A) A (B) B (C) C (D) D (E) it could be A or B

23. Lois wants to write the numbers from 1 to 7 in the grid shown. Two consecutive numbers cannot be written in two neighbouring cells. Neighbouring cells meet at the edge or at a corner. What numbers can she write in the cell marked with a question mark?



(A) all seven numbers (B) only odd numbers
(C) only even numbers (D) only number 4
(E) only the numbers 1 or 7

24. The distance from Anna's to Mary's house is 16 kilometers along the shown road.
The distance from Mary's to Nick's house is 20 kilometers.
The distance from Nick's to John's house is 19 kilometers.



How far is Anna's house from John's?

(A) 15 (B) 16 (C) 18 (D) 19 (E) 20

5.-6. třída, 2018, klokan

22. In the figure on the right, the five balls A, B, C, D and E weigh 30, 50, 50, 50 and 80 grams, but not necessarily in this order.
Which ball weighs 30 grams?

(A) A (B) B (C) C
(D) D (E) E

23. If A, B, C are distinct digits, which of the following numbers **cannot** be the largest possible 6-digit number written using three digits A, two digits B, and one digit C?

(A) AAABBC (B) CAAABB (C) BBAAAC (D) AAABCB (E) AAACBB

24. In the World of Numbers, there are many number-machines, which work in the following way: the machine adds the two beginning digits of the number and replaces them by their sum. For example, beginning with the number 87312 and using six such machines we obtain:

$$87312 \longrightarrow 15312 \longrightarrow 6312 \longrightarrow 912 \longrightarrow 102 \longrightarrow 12 \longrightarrow 3$$

How many such machines should be used in order to get the number $\underbrace{9\ldots9}_{50\ times}$ from the number $\underbrace{9\ldots9}_{100\ times}$?

(A) 50 (B) 60 (C) 100 (D) 80 (E) Not possible to obtain this number

25. Nick wants to arrange the numbers 2, 3, 4, ..., 10 into several groups such that the sum of the numbers in each group is the same. What is the largest number of groups he can get?

(A) 2 (B) 3 (C) 4 (D) 6 (E) other answer