Three point problems

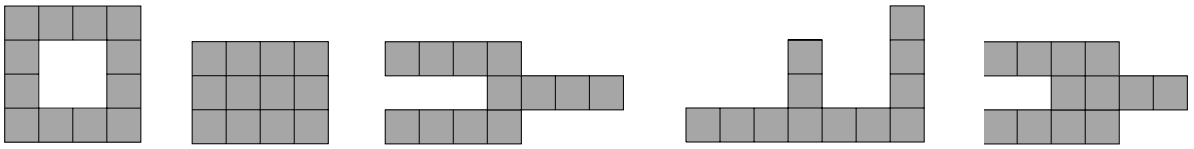
1. Which sum is the biggest?

A: 201+720+17 B: 20+17+20+17 C: 2017+2017

D: 2+0+1+7+2+0+1+7 E: 20+1720+17

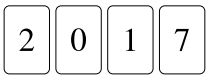
2. Ahmed has 4 pieces of this shape: 

Which picture can he *not* make from these 4 pieces?

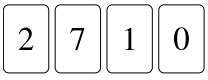
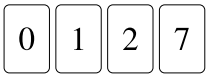
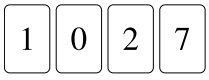


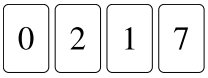
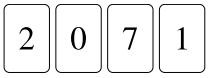
A B C D E

Denmark

3. Four cards lie in a row. 

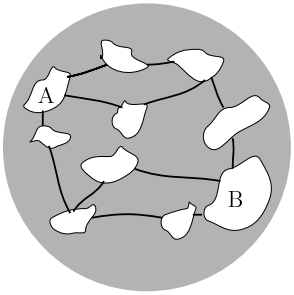
Which row of cards can you *not* obtain if you can only swap two cards?

A:  B:  C: 

D:  E: 

Denmark

4. On a planet there are 10 islands and 12 bridges.
What is the smallest number of bridges that must be closed in order to stop the traffic between A and B?



A: 1 B: 2 C:3 D: 4 E: 5

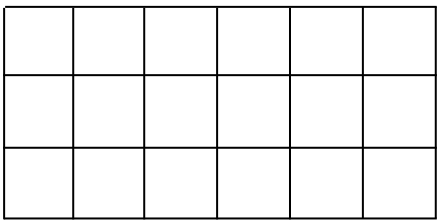
Denmark

5. A special dice has a number on each face. The sums of the numbers on opposite faces are all equal. Five of the numbers are 2, 3, 4, 6 and 8. What number is on the sixth face?

A: 1 B: 5 C: 7 D: 9 E: 10

Norway

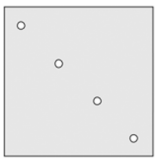
6. The squares of the rectangle will be coloured so that 1/3 of all squares are blue and half of all squares are yellow. The rest of the squares are to be coloured red. How many squares will be red?

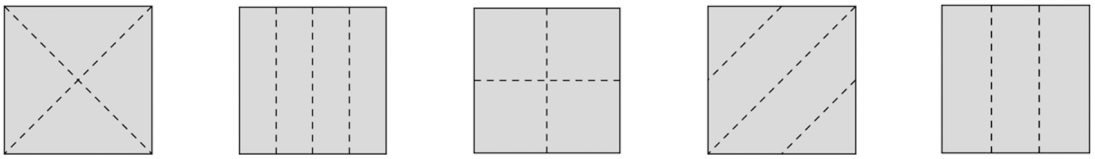


A: 1 B: 2 C: 3 D: 4 E: 5

Norway

7. Ronja folded a piece of paper, used a hole puncher and punched exactly one whole in the paper. The unfolded the paper can be seen in the picture. Which of the following pictures shows the lines along which Ronja folded the piece of paper?





A B C D E

Norway

8. $1111 \cdot 1111 = 1234321$

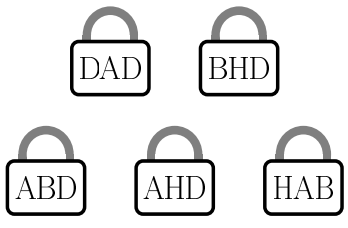
Hur much is $1111 \cdot 2222$

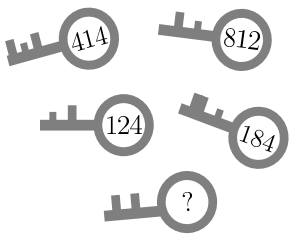
A: 2 468 642 B: 2 345 432 C: 2 234 322 D: 3 456 543 E: 4 321 234

Finland

Four point problems

9. The 5 keys fit the 5 padlocks. The numbers on the keys refer to the letters on the padlocks..





What is written on the last key?

A: 382 B: 282 C: 284 D: 823 E: 824

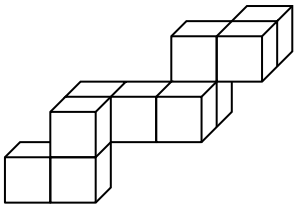
Denmark

10. Two boys are taking part in the Kangaroo contest and work through the problems at different speeds. In the time it takes Petter to solve two problems, Albin manages to solve three problems. In total the boys solve 30 problems. How many more problems did Albin solve than Petter?

A: 5 B: 6 C: 8 D: 10 E: 15

Belarus

11 The construction is made of cubes with side length 1. David wants to put the construction into a regular box. Which of the following boxes is the smallest he can use?



A: 3×3×4 B: 3×5×5 C: 3×4×5

D: 4×4×4 E: 4×4×5

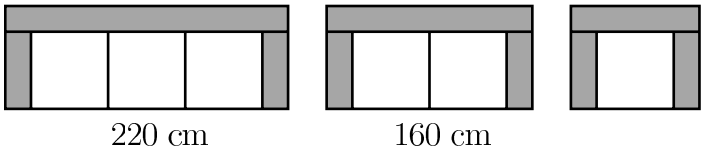
Russia

12 Lara went hiking in the mountains for 5 days. She started on Monday and her last trip was on Friday. Each day she walked 2 km more than the day before. When the tour was over, her total distance was 70 km. What distance did Lara walk on Thursday?

A: 12 km B: 13 km C: 14 km D: 15 km E: 16 km

Norway

13 The Modern Furniture store is selling sofas, loveseats, and chairs made from identical modular pieces as shown in the picture. Including the armrests, the width of the sofa is 220 cm and the width of the loveseat is 160 cm.

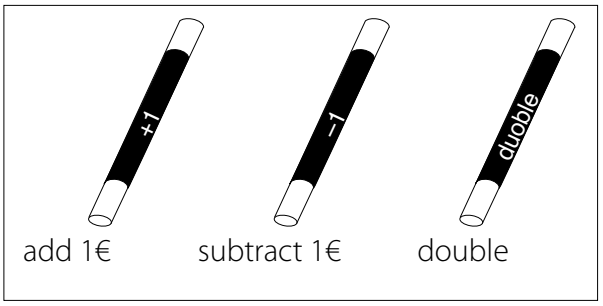


What is the width of the chair?

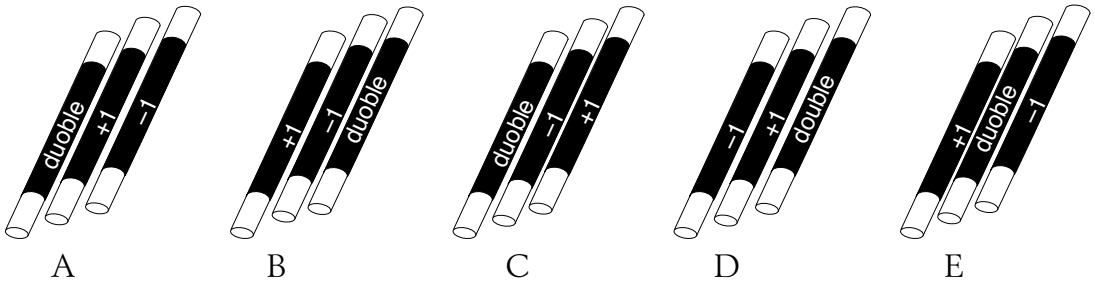
A: 60 cm B: 80 cm C: 90 cm D: 100 cm E: 120 cm

Canada

14 Boris has an amount of money and 3 magic wands that he can use only once. One of the wands adds 1 €, one subtracts 1 € and the third wand doubles the amount.

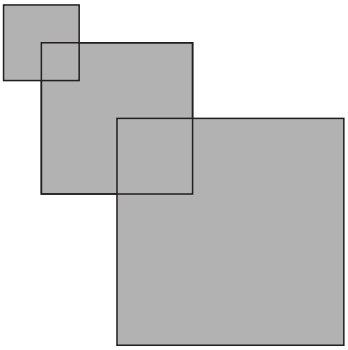


In which order must he use these wands to obtain the largest amount of money?



Moldavia

15. Rafael has drawn three squares. The first one has side length 2 cm. The second one has side length 4 cm and a vertex is placed in the centre of the first square. The last one has side length 6 cm, and a vertex is placed in the centre of the second square, as shown in the picture. What is the area of the figure?



A: 55 cm^2 B: 51 cm^2 C: 46 cm^2

D: 40 cm^2 E: 36 cm^2

Catalonia

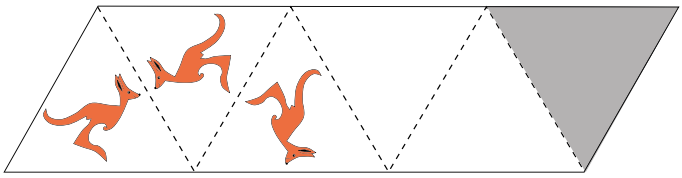
16. Four players scored goals in a handball match. All of them scored a different number of goals. Among the four Mia was the one who scored the least number of goals. The other three have scored 20 goals in total. What is the largest number of goals Mia could have scored?

A: 2 B: 3 C: 4 D: 5 E: 6

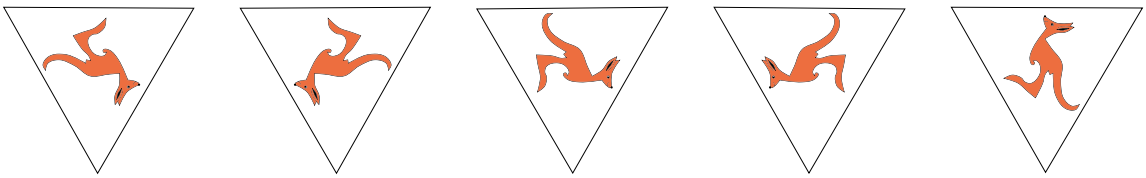
Norway

Five point problems

17. There is a picture of a kangaroo in the first triangle. Dotted lines act as mirrors. The first 2 reflections are shown.



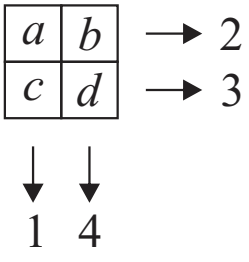
What does the reflection look like in the shaded triangle?



A B C D E

Mexico

18. When we add the numbers in each row and along the columns we get the results shown.



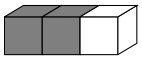
Which statement is true?

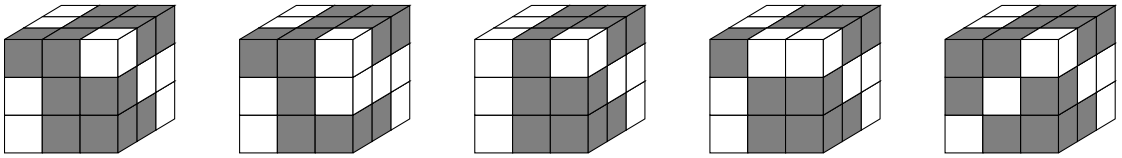
A: $a=d$ B: $b=c$ C: $a>d$

D: $a<d$ E: $c>b$

Pakistan

19. A bar consists of 2 grey cubes and 1 white cube glued together as shown in the figure.
Which figure can be built from 9 such bars?

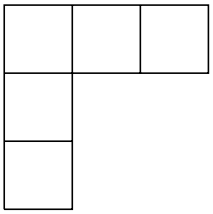




A B C D E

Denmark

20. The numbers 1, 2, 3, 4, and 5 have to be written in the five cells in the figure in the following way:



– If a number is just below another number, it has to be greater.
– If a number is just to the right of an other number, it has to be greater.

In how many ways can this be done?

A: 3 B: 4 C: 5 D: 6 E: 8

Denmark

21. Eight kangaroos stood in a line as shown in the diagram.

At some point, two kangaroos standing side by side and facing each other exchanged places by jumping past each other. This was repeated until no further jumps were possible.
How many exchanges were made?

A: 2 B: 10 C: 12 D: 13 E: 16

Belarus

22. A bag contains only red marbles and green marbles. For any 5 marbles we pick, at least one is red and for any 6 marbles we pick, at least one is green.
What is the largest number of marbles that the bag can contain?

A: 11 B: 10 C: 9 D: 8 E: 7

Italy

23. Three girls have their own favorite numbers. Anna likes even numbers, Birgitta likes numbers divisible by 3, Carolina likes numbers divisible by 5. Each of these three girls went separately, one by one, to a basket containing 8 balls with numbers written on them, and took all the balls with numbers she likes.
It turned out that Anna collected balls with numbers 32 and 52, Birgitta collected balls with numbers 24, 33 and 45, Carolina collected 20, 25 and 35.

In what order did the girls approch the basket?

A: Birgitta, Carolina, Anna

B: Carolina, Birgitta, Anna

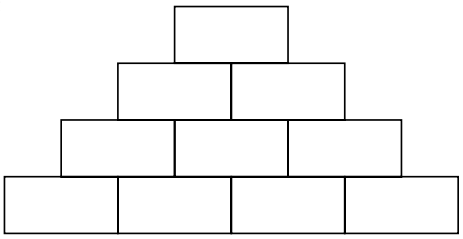
C: Birgitta, Anna, Carolina

D: Anna, Carolina, Birgitta

E: Carolina, Anna, Birgitta

Poland

24 There should be a natural number in each box in the diagram such that each number above the bottom row is the sum of the two numbers in the boxes immediately underneath.



What is the largest number of odd numbers that can be written?

A: 4 B: 5 C: 6 D: 7 E: 8

Germany

Svarsblankett

Markera ditt svar i rätt ruta

Uppgift	A	B	C	D	E	Poäng
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
					SUMMA	

Namn:.....

Klass:.....