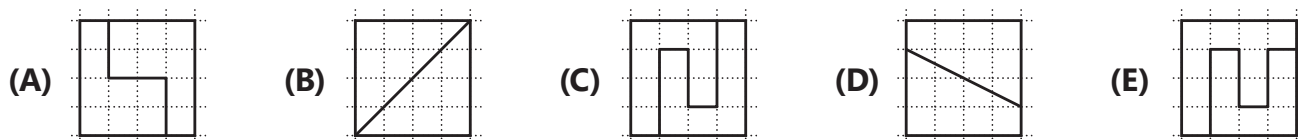


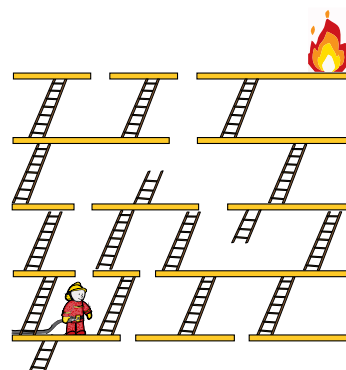
3 points problems

01. Which square is cut into 2 different shapes?



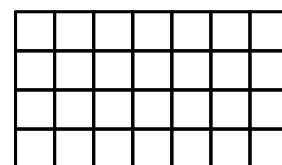
02. What is the smallest number of ladders the firefighter must use to reach the fire? He **CANNOT** jump over interrupted planks.

- (A) 4 (D) 7
(B) 5 (E) 8
(C) 6



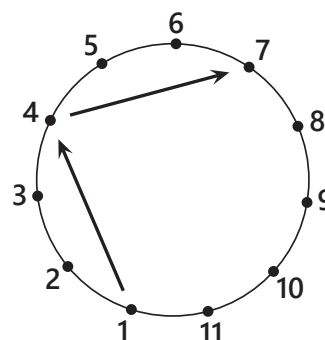
03. The table to the right consists of 28 white cells. Ira paints 2 rows and 1 column. A row is from left to right. A column is from top to bottom. How many cells will remain white?

- (A) 8 (B) 10 (C) 12 (D) 14 (E) 17



04. Soccer players numbered 1 to 11 stand in a circle. Each player kicks the ball to the third player on their left, as shown. Player 1 starts. This kicking pattern continues until a player has the ball for the second time. What is the number of the player who kicked the ball last?

- (A) 7 (B) 8 (C) 9 (D) 10 (E) 11



05. Mohammad wrote 3 consecutive 4-digit numbers in a row. His sister erased some digits. What are the missing digits from left to right? (For example, 213, 214, 215 are 3 consecutive 3-digit numbers.)

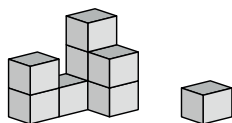
___7___, ___898___, ___48___

- (A) 389, 3, 99 (B) 489, 3, 96 (C) 489, 4, 98 (D) 489, 4, 99 (E) 488, 4, 99

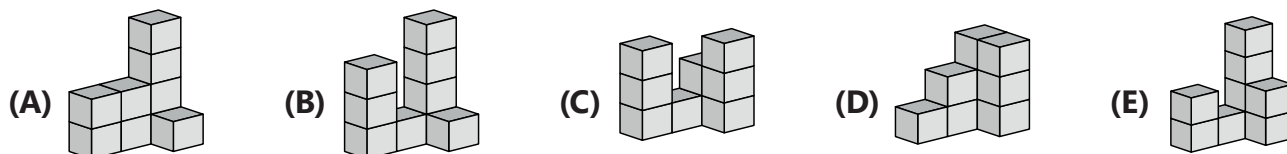
06. Lizzy pays 7 dollars for 3 items. The cost of each item is different and is a whole number. How much is the most expensive item?

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

07. A cat knocks off 1 block from Felix's construction.

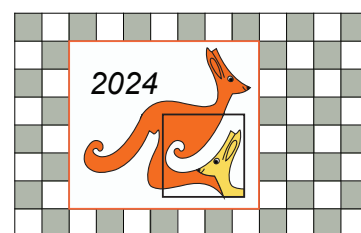


What could this construction have looked like **before** the block was knocked off?



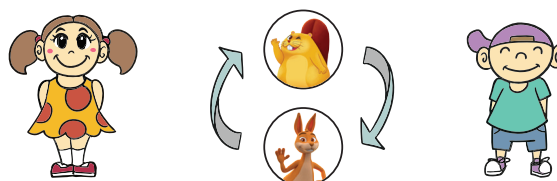
08. Alex has a Kangaroo poster on the kitchen wall. How many grey tiles are there behind the poster, assuming the pattern of the tiles does not change?

- (A) 15 (B) 21 (C) 25 (D) 30 (E) 35



4 points problems

09. Antonia and Lucian toss a coin. If the child sees the beaver side, the child advances 3 steps. If the child sees the kangaroo side, the child goes back 1 step or stays at the starting position. The starting position is shown.



Starting position	1	2	3	4	5	6	7	8	9	10	11	12
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Each of them tossed the coin 4 times. Antonia advanced to number 4 and Lucian advanced to number 8. How many times in total did they see the kangaroo side of the coin?

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

10. There are five different kinds of fruit in a bowl: , , , and .

Ann likes . Ben likes , , , and . Cam likes , and .

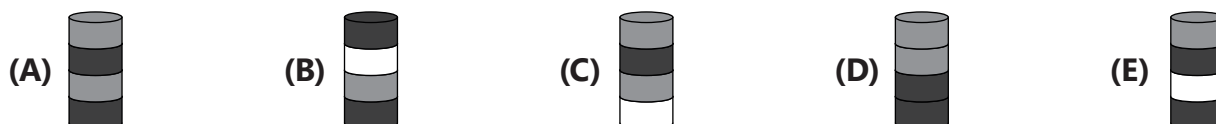
Dan likes and . Eli likes and .

Everyone gets a fruit they like. Everyone gets a different kind of fruit.

What does Ben get?

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

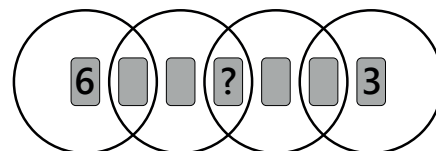
11. Ada has built a tower of 8 discs, as in the picture. Initially she removes the second disc from the bottom. She then removes the third disc from the bottom of the remaining structure. She is left with a new tower with 6 discs left. Then she removes the fourth disc from the bottom of this tower. She now has another tower with 5 discs left. Finally, she removes the fifth disc from the bottom. What does the tower she ends up with look like?



12. Peter the penguin goes fishing every day and brings back 9 fish for his 2 chicks. Each day, he gives 5 fish to the first chick he sees and 4 fish to the second chick, which they eat. Over the last few days, 1 chick has eaten 26 fish. How many fish has the other chick eaten?

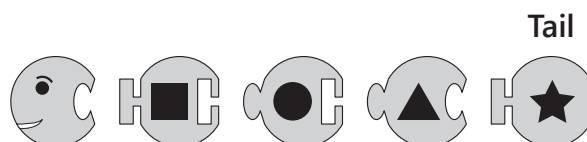
(A) 19 (B) 22 (C) 25 (D) 28 (E) 31

13. 7 cards, numbered 1 to 7, are placed in 4 overlapping rings. The sum of the numbers in each ring is 10. Which number is under the question mark?



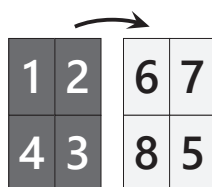
(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

14. Lucas wants to make a caterpillar that has a head, a tail and either 1, 2 or 3 puzzle pieces in between. How many different caterpillars can Lucas make without flipping pieces?



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

15. John writes the numbers 1 to 4 on a sheet. Then he flips the sheet and writes the numbers 5 to 8, as shown.



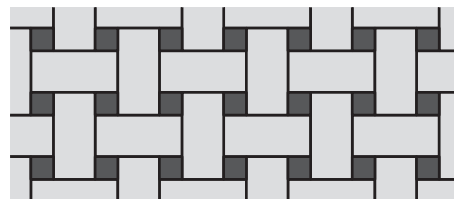
After that, he cuts the sheet into 4 rectangular cards and puts them in a row:



What is the sum of the numbers represented by the question marks?

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

16. A floor is covered with 2 kinds of tiles:  and . The rectangles have size 23 cm $\times$ 11 cm. The picture shows a part of the floor. What is the side-length of the square tiles?



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

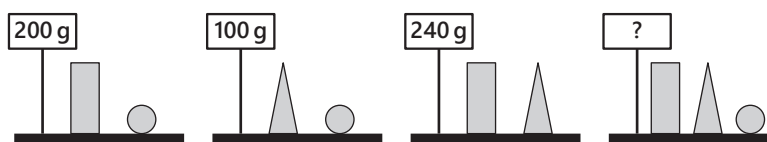
5 points problems

17. A student has 3 cards with numbers on them. Their sum is 782. Unfortunately, a worm ate part of each card, as shown. What is the sum of the 3 missing digits?



- (A) 8 (B) 9 (C) 10 (D) 11 (E) 12

18. Lucy weighs some blocks, as shown.



How much do the 3 different blocks weigh together?

- (A) 270 g (B) 280 g (C) 290 g (D) 300 g (E) 310 g

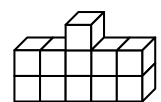
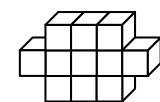
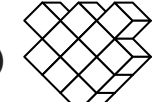
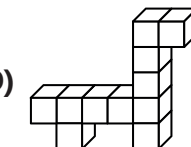
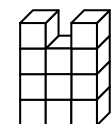
19. There are 60 pupils on a trip. When they line up, the colours of their reflective vests follow the pattern: yellow, green, yellow, green...

The colours of their backpacks follow a different pattern: red, brown, orange, red, brown, orange...

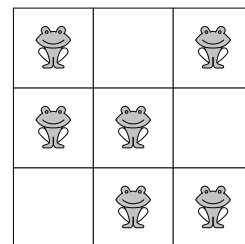
How many pupils with a yellow reflective vest also have an orange backpack?

- (A) 3 (B) 4 (C) 6 (D) 8 (E) 10

20. Kangaroo has 3 small blocks:   . He can rotate and flip them to make a bigger block. Which of the five figures **CAN'T** he make?

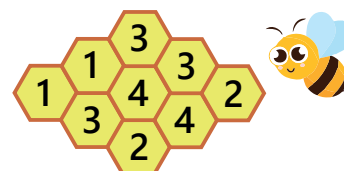
- (A)  (B)  (C)  (D)  (E) 

21. There are exactly 2 frogs in each row and each column of the grid. The frogs decide that 2 of them will jump to a neighbouring empty cell at the same time. Neighbouring cells have a side in common. After that, there still are exactly 2 frogs in each row and in each column. In how many ways can the frogs do this?



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

22. The figure on the right shows a beehive with 9 cells. There is honey in some cells. The number in each cell shows how many neighbouring cells contain honey. Neighbouring cells have a side in common. How many cells contain honey?



(A) 4 (B) 5 (C) 6 (D) 7 (E) 8

23. 3 girls walk up to a tray one after the other and take some cookies. One of the girls takes all the hearts available



on the tray, one takes all the white cookies available on the tray, and one takes all the large cookies available on the tray. However, they do not necessarily take the cookies in this order. One girl takes 3 cookies, one takes 6 cookies, and one takes 7 cookies.

Which of the following sets of cookies does one of these girls take?

(A) ○ ○ ♥

(D) ♥ ♥ ♥ ♥ ♥ ♥ ♥

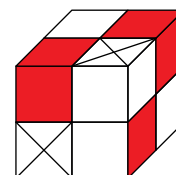
(B) ♥ ○ ○ ○ ○ ○ ♥

(E) ○ ○ ○

(C) ○ ○ ○ ○ ○ ♥

24. There are 2 types of blocks: white  and red .

A small cube can be made of 4 white blocks or of 1 white and 1 red block. The large cube shown in the picture is made of small cubes.



What is the smallest number of white blocks needed to make the large cube?

(A) 8 (B) 11 (C) 13 (D) 14 (E) 23