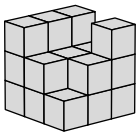
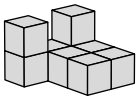
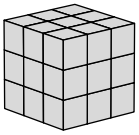
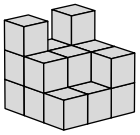
## Ecolier

3 points

**1.** Mia is joining small cubes, adding one at a time, to build a $3 \times 3 \times 3$ cube.
She took pictures at 5 different moments.
What does Mia's fourth picture look like?

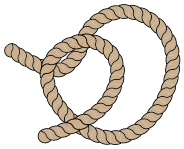
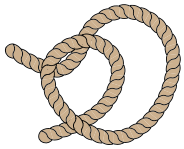
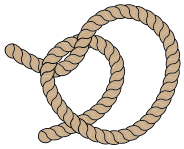
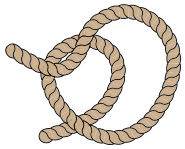
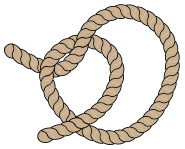
(**A**)  (**B**)  (**C**)  (**D**)  (**E**) 

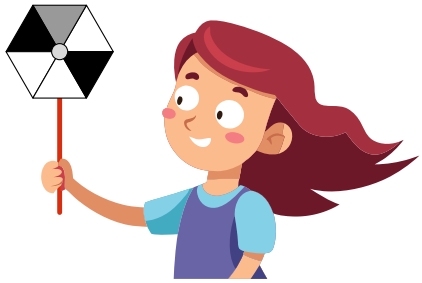
**2.** Simona writes the four digits 2, 0, 2, 5 in the four boxes.
Which order would give her the largest result?

$\square + \square - \square + \square$

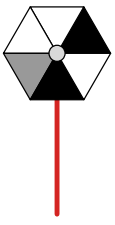
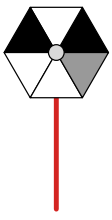
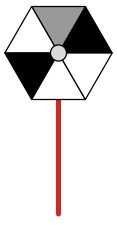
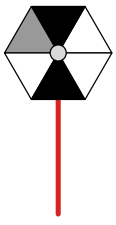
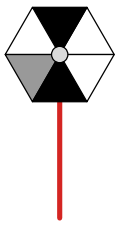
(**A**) 0, 2, 2, 5 (**B**) 0, 5, 2, 2 (**C**) 2, 5, 2, 0 (**D**) 5, 0, 2, 2 (**E**) 5, 2, 0, 2

**3.** Which rope ties into a knot when the ends are pulled?

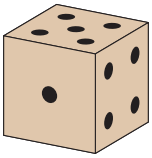
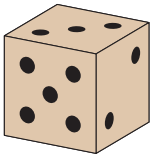
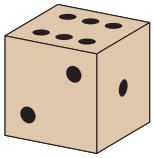
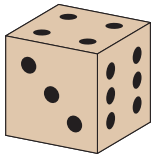
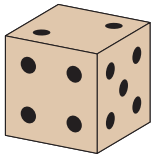
(**A**)  (**B**)  (**C**)  (**D**)  (**E**) 



**4.** Larissa spins her sail. Which of the sails below is hers?

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

**5.** On a normal dice, the total number of spots on two opposite faces is always 7.
Which one of the dice shown could be a normal dice?

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

**6.** Alex stepped on some tracks on the ground.
What is beneath her shoe?

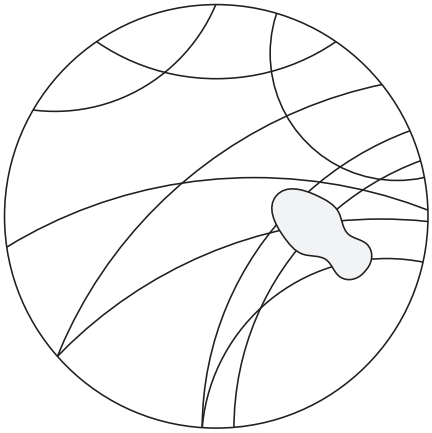
(**A**) 

(**B**) 

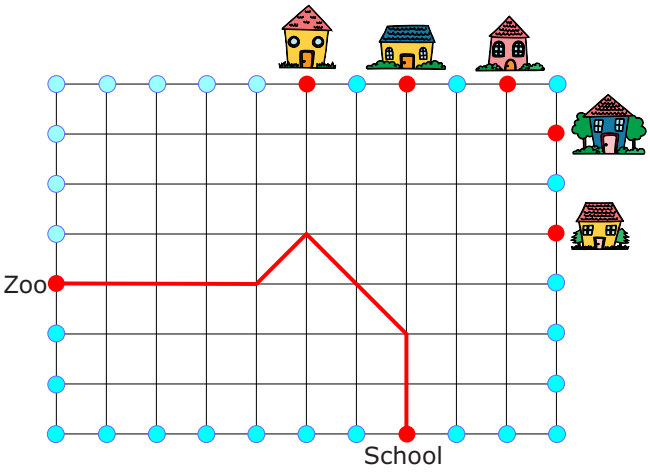
(**C**) 

(**D**) 

(**E**) 



**7.** Kenny the Kangaroo jumps from the School to the Zoo as follows: $\uparrow 2$, $\nwarrow 2$, $\swarrow 1$, $\leftarrow 4$, as shown in the picture.




Then, he jumps from the Zoo as follows: $\rightarrow 3$, $\nearrow 2$, $\uparrow 2$.
Which house will he get to?

(**A**) 

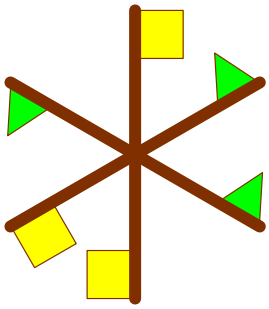
(**B**) 

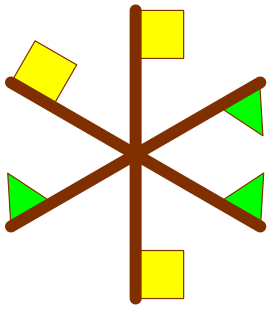
(**C**) 

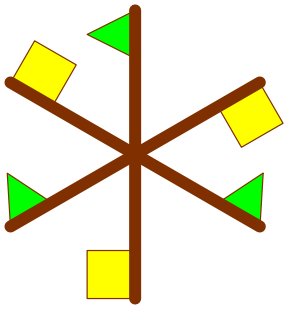
(**D**) 

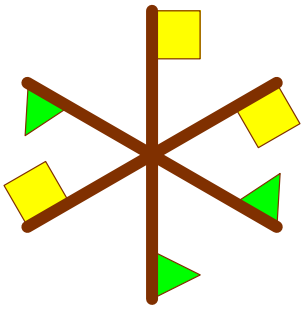
(**E**) 

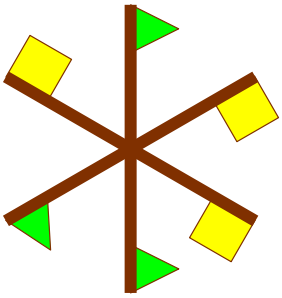
**8.** Which pinwheel can Jorge build with these 3 rods?

(**A**) 

(**B**) 

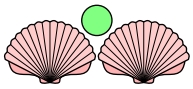
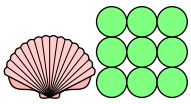
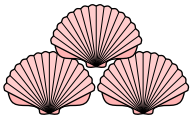
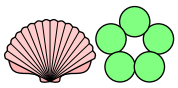
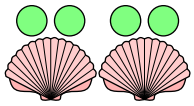
(**C**) 

(**D**) 

(**E**) 

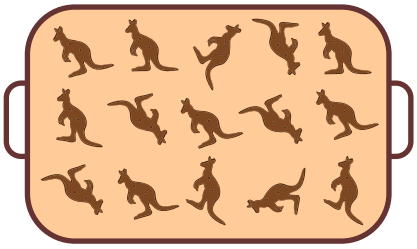
4 points

**9.** Nico and his little sister pay with shells and marbles in their playshop.
Each shell has a value of 6 and each marble has a value of 1.
Which of the following has a total value of 16?

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

**10.** Anna, Bonnie and Caspar have some kangaroo cookies on their plates, as shown.

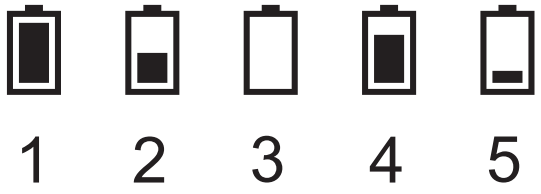

They then share the remaining 15 cookies on the tray so that everyone now has the same number of cookies on their plates.



How many <u>more</u> cookies does Anna get?

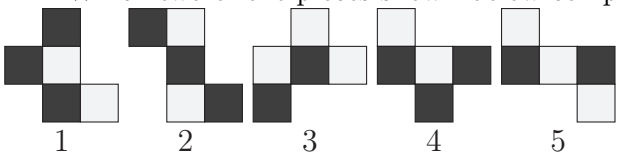
(**A**) 4 (**B**) 5 (**C**) 6 (**D**) 7 (**E**) 8

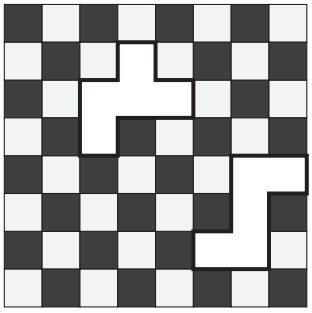
**11.** In the morning, 5 friends had identical fully-charged mobile phones.
By the evening, Bob had spoken on the phone as much as Ann and Cristina together.
Bob ran out of power. David had not used his phone at all. Which phone belonged to Edward?




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

**12.** Which two of the pieces shown below complete the chessboard?



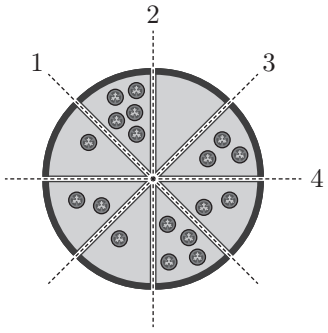



(**A**) Pieces 1 and 2 (**B**) Pieces 1 and 5 (**C**) Pieces 3 and 4
(**D**) Pieces 3 and 5 (**E**) Pieces 4 and 5

**13.** In the petting zoo, Renée feeds 6 sheep.
She gives them a total of 210 grams of dry food for lunch.
She gives the smallest sheep twice as much food as she gives to each of the others.
How much does the smallest sheep get?

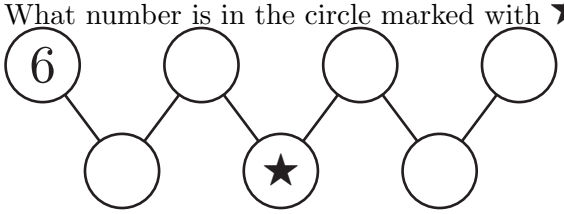
(**A**) 55 grams (**B**) 60 grams (**C**) 70 grams (**D**) 75 grams (**E**) 80 grams

**14.** Tom wishes to slice a pizza into 2 halves.
He also wishes to have the same number of tomatoes on each half.
It is possible for him to do this with two different cuts.
Along which lines could he cut?



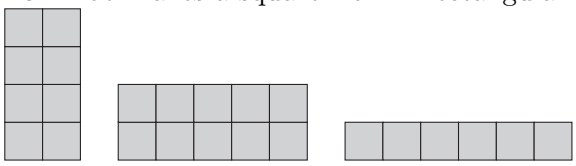

(**A**) 1 and 3 (**B**) 1 and 4 (**C**) 2 and 3 (**D**) 2 and 4 (**E**) 3 and 4

**15.** Maria fills the circles with the numbers 1, 2, 3, 4, 5, 6 and 7.
The number in each of the lower circles is equal to the sum of the two numbers in the connected circles above it.
What number is in the circle marked with ★?

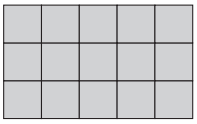



(**A**) 2 (**B**) 3 (**C**) 4 (**D**) 5 (**E**) 7

**16.** Bob makes a square from 4 rectangular pieces. 3 of the pieces he uses are shown.



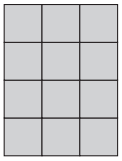
Which of the following is the fourth piece he uses?

(**A**) 

(**B**) 

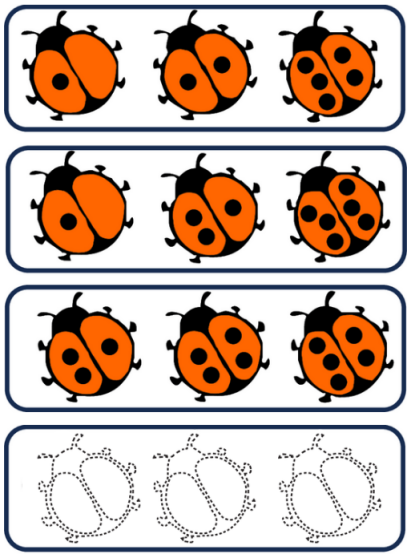
(**C**) 

(**D**) 

(**E**) 

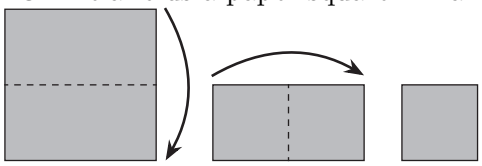
5 points

**17.** 6 ladybirds have 1, 2, 3, 4, 5 or 6 spots each. Marta took 4 photos of them in groups of 3.
Each ladybird appeared the same number of times in the photos.
3 of the photos, along with the outline of the fourth photo, are shown here.
How many spots do the three ladybirds in Marta's fourth photo have in total?

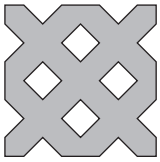


(**A**) 9 (**B**) 10 (**C**) 11 (**D**) 12 (**E**) 23

**18.** Nela folds a paper square in half and then in half again, as shown.



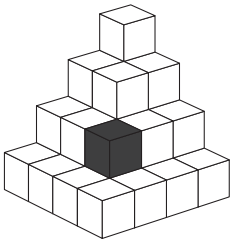
Next she cuts pieces out of the folded paper.
After unfolding she sees a paper snowflake.

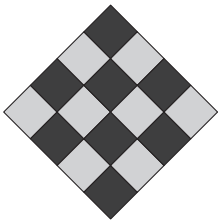
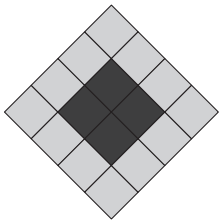


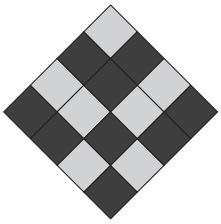
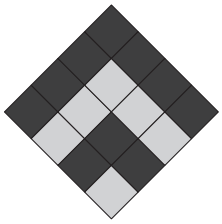
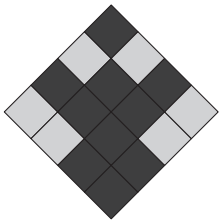
How did she cut the folded piece of paper?

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

**19.** Leonia has built a pyramid using black and grey cubes.
She arranges each cube so each face does not touch a face of another cube with the same colour.
One of the black cubes is shown in the figure.
What will Leonia's pyramid look like from above?



(**A**)  (**B**) 

(**C**)  (**D**)  (**E**) 

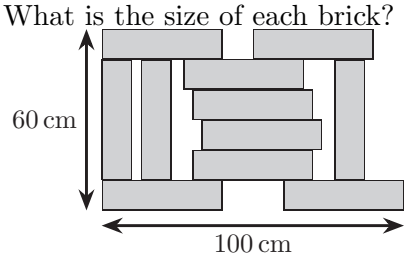
**20.** The picture shows the page for one month of a calendar, without any of the dates.

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

The total of the dates for the 2 shaded days is 29.
On what day of the week does the first day of the month fall?

(**A**) Monday (**B**) Tuesday (**C**) Wednesday
(**D**) Thursday (**E**) Sunday

**21.** The construction uses 11 identical bricks.
The construction has length 100 cm and width 60 cm.
What is the size of each brick?




(**A**) 8 cm, 40 cm

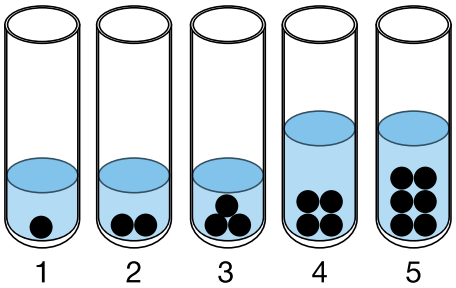
(**B**) 10 cm, 40 cm

(**C**) 12 cm, 40 cm

(**D**) 8 cm, 44 cm

(**E**) 10 cm, 50 cm

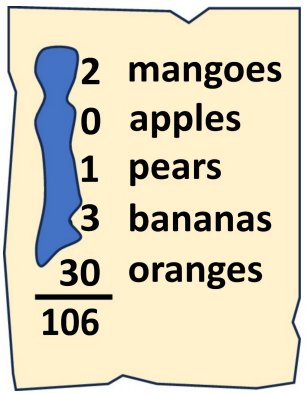
**22.** Identical balls have been placed in 5 identical test tubes, as shown.
Then, water is added to each of these test tubes.




The water levels in test tubes 1, 2, and 3 are the same.
The water levels in test tubes 4 and 5 are also the same and twice as high as in the first 3 test tubes.
Then, all the balls are removed.
Which test tube has the least water?

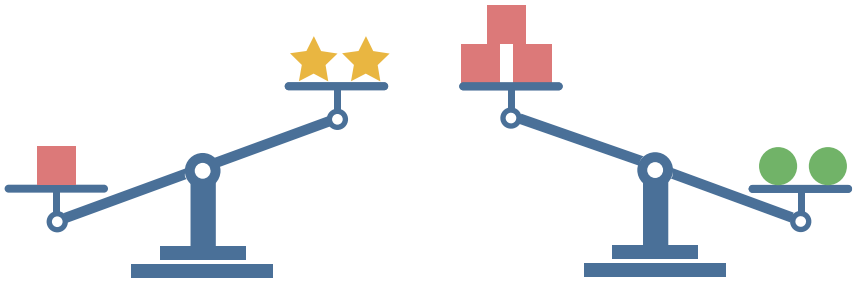
(**A**) Test tube 1 (**B**) Test tube 2 (**C**) Test tube 3
(**D**) Test tube 4 (**E**) Test tube 5

**23.** Rossitza has written down the number of pieces of different fruit that she has.
Unfortunately, some digits have been covered by paint.
In total, she has 106 pieces of fruit. The number of pieces of two of the types of fruit she has are equal.
She has twice as many of one type of fruit as she does of some other type.
She has more than 10 pieces of each type of fruit.
How many bananas does she have?




(**A**) 13 (**B**) 23 (**C**) 43 (**D**) 53 (**E**) 63

**24.** A pair of scales is used to weigh 3 different objects, and the results are shown below.



Each type of object has a different mass. The masses can be 1, 2, 3, 4, or 5 kg.

What is the mass of one ■ in kilograms?

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