



1. Help the bee to reach the flower with the correct direction given below.

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		<u>у</u>

 $\begin{aligned} \mathbf{(A)} &\rightarrow \downarrow \rightarrow \downarrow \downarrow \rightarrow \\ \mathbf{(B)} &\downarrow \downarrow \rightarrow \downarrow \downarrow \\ \mathbf{(C)} &\rightarrow \downarrow \rightarrow \downarrow \rightarrow \\ \mathbf{(D)} &\rightarrow \rightarrow \downarrow \downarrow \downarrow \\ \mathbf{(E)} &\downarrow \rightarrow \rightarrow \downarrow \downarrow \downarrow \end{aligned}$



2. The mirrors reflect the laser beam like this: Where does this laser beam end?





Which coin should be moved to an empty cell?

- $(\mathbf{A}) \mathbf{A} \qquad (\mathbf{B}) \mathbf{B} \qquad (\mathbf{C}) \mathbf{C} \qquad (\mathbf{D}) \mathbf{D} \qquad (\mathbf{E}) \mathbf{E}$
- 4. At least how many boxes does Bill have to move so that he can open the dark TRAIN box?

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5. Kengu always makes one large jump followed by two small jumps on the number line as shown in the picture.

Kengu starts at 0 and ends on 16.



How many jumps does Kengu make in total?

(A) 4 (B) 7 (C) 8 (D) 9 (E) 12

3	2	5	4	2	1
1	4	3	1	3	4
2	5		5	2	1
4	1				3
$\frac{4}{3}$	1 2	4	2	5	$\frac{3}{2}$

6.

Which piece should be in the middle in such a way that two squares with common sides do not contain the same number?



7. $2022 + \Box = 2020 + \Box$

Which two numbers can be used in boxes to make it correct?

(\mathbf{A}) 3 and 5	(\mathbf{B}) 4 and 1	(\mathbf{C}) 3 and 4	(\mathbf{D}) 7 and 2	$(\mathbf{E}) 9 \text{ and } 8$
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8. John built a construction as shown.



What will John see if he looks at his construction from above?



4 points

9. Five cars numbered 1, 2, 3, 4, 5 are moving in the same direction.



At first, the last car overtook the two cars ahead. Then the second last (=penultimate) car overtook the two cars ahead. After that, the middle car overtook the two cars ahead. In what order are the cars now?

- $(\mathbf{A}) 1, 2, 3, 5, 4$
- (\mathbf{B}) 2, 1, 3, 5, 4
- $(\mathbf{C}) 2, 1, 5, 3, 4$
- (\mathbf{D}) 3, 1, 4, 2, 5
- (\mathbf{E}) 4, 1, 2, 5, 3

10. The ages of a family of kangaroos are 2, 4, 5, 6, 8 and 10 years.

The sum of the ages of four of them is 22 years. What are the ages of the other two kangaroos?

- $(\mathbf{A}) \ 2 \ \text{and} \ 8$
- $(\mathbf{B})\;4$ and 5
- $(\mathbf{C})\;5$ and 8
- (\mathbf{D}) 6 and 8
- (\mathbf{E}) 6 and 10



11. During my holiday I sent the following five postcards to my friends.

There are **no** ducks on Mike's card.

Cara's card has the sun on it.

There are exactly two living creatures on Paula's card.

Lexi's card has a dog on it.

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There are kangaroos on Heather's card. Which card did Mike get?



12. Mosif of wanted the the three sum bers and column be in each row in each to same.

He made one mistake.

Which number must he correct?

(A) 1 (B) 3 (C) one of the 4s (D) 5 (E) one of the 7s \Box

13. Aladdin's carpet has the shape of a square.

Each side of this carpet has the same number of dots arranged in two rows.



How many dots are there on this carpet?

$(\mathbf{I}, \mathbf{I}) = (\mathbf{D}, \mathbf{I}) = (\mathbf{D}, \mathbf{I}) = (\mathbf{D}, \mathbf{I}) = (\mathbf{I}, \mathbf{I}) = (I$	(A) 48	(B) 44	(C) 40	(D) 36	$(\underline{\mathbf{E}})$
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14. Joanna folds the grid paper twice as shown. Afterwards she punches a hole at the black spot shown by the arrow.

Which numbers is she going to punch?





9	1	5
3	7	6
4	7	4

num-

the

There is the same number of pupils in each row.

There are 2 rows of pupils in front of Robert, 1 row of pupils behind him, 3 pupils on his left and 5 pupils on his right.

How many pupils are there in this class?

(A) 10 (B) 17 (C) 18 (D) 27 (E) 36 (E) 36

16. The cube in the picture was built from the three kinds of wooden blocks shown. How many white wooden blocks are used?



5 points

17. Wanda chose a few of the following figures and said: Among the selected figures there are 2 coloured, 2 large and 2 round ones.

At least how many of the following figures did Wanda choose?



18. Three football teams participate in a sports tournament.Each team plays just once with the other two.In each game, the winner gets 3 points and the loser doesn't get any points.In a draw, each team gets 1 point.After all the games, which number cannot be the points of any of the teams?

(A) 1 (B) 2 (C) 4 (D) 5 (E) 6



20. Alma wants to put one of the pieces in the middle such that a child in A is able to travel to B and E, but not to D.



21. Ahmad and Zhaleh start moving from point A in the shown direction with the same speed. Ahmad walks around the square-shaped garden and Zhaleh walks around the rectangular-shaped one. At least how many rounds of walking (around the square-shaped garden) would it take for Ahmad to meet Zhaleh again at point A?



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22. Five children ate plums.Lauren ate two plums more than Sophie.Betty ate three plums less than Lauren.Claire ate one plum more than Betty and three plums less than Alice.Which two girls ate the same number of plums?

- (\mathbf{A}) Claire and Lauren
- (**B**) Claire and Sophie.
- (\mathbf{C}) Lauren and Alice.
- (\mathbf{D}) Sophie and Alice.
- (E) Alice and Betty.

23. A small caterpillar (see picture) curls up to sleep.



What might that look like?



24. In the squares, the same number is hidden under the same color. Next to each row, the sum of the numbers in that row is given.



What number is hidden under the red color?

(A) 6 (B) 8 (C) 10 (D) 12 (E) 14