

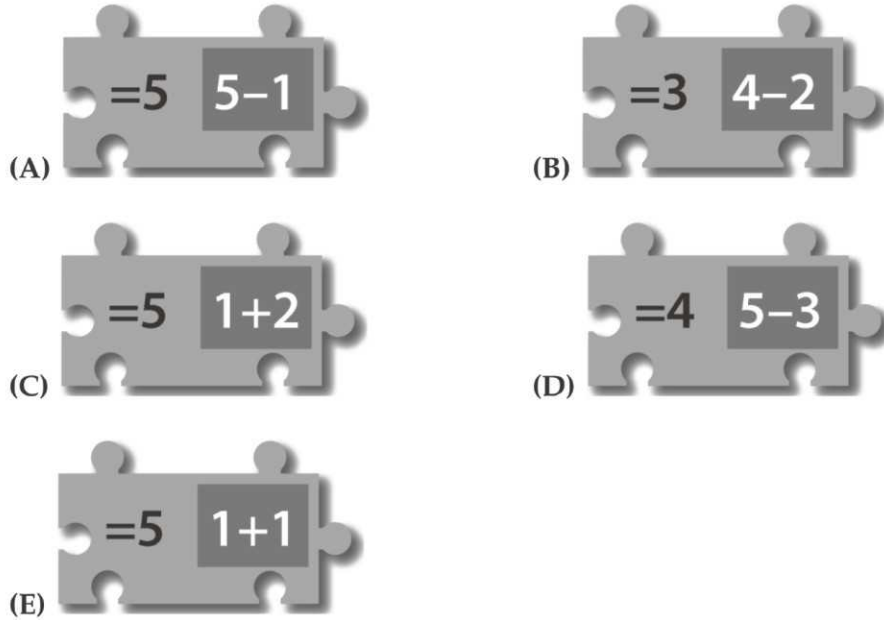
# KSF 2017 - Problems Ecolier (Class 3 & 4)

Time Allowed: 120 minutes

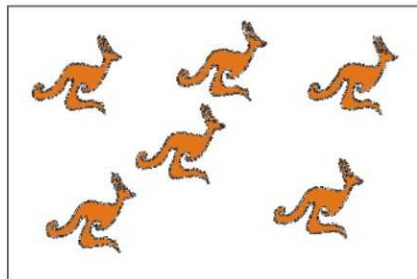
## SECTION ONE - (3 points problems)



Which of the pieces A - E will fit between the above two pieces so the two equalities are correct?



2. John looks through the window. He sees half of the kangaroos in the park (see picture).



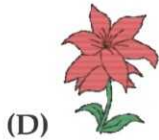
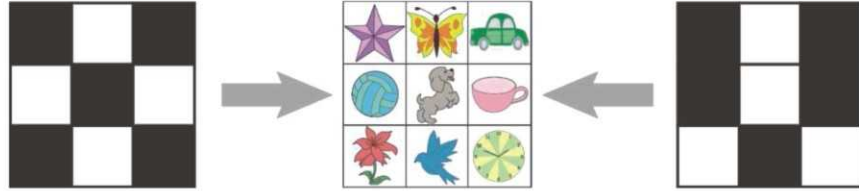
How many kangaroos are there in the park?

- (A) 12                      (B) 14                      (C) 16  
(D) 18                      (E) 20

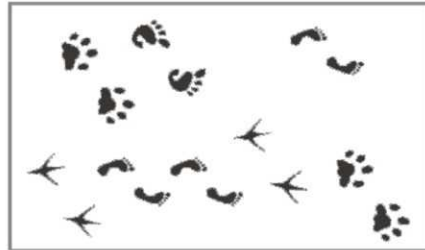
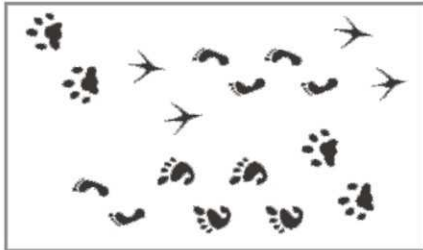
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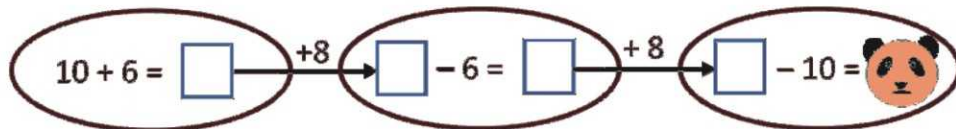
3. Two gridded transparent sheets are darkened in some squares, as shown. They are both slid on top of the board shown in the middle. Then the pictures behind the darkened squares cannot be seen. Only one of the pictures can still be seen, which one is it?



4. A picture of footprints was turned upside down. Which footprints are missing?



5. What number is hidden behind the panda?



- (A) 16  
(D) 24

- (B) 18  
(E) 28

- (C) 20

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6. In the tables correct sums are shown. What number is in the box with the question mark?

+	11	7	2
6	17	13	8
	?	11	

- (A) 10                                      (B) 12                                      (C) 13  
 (D) 15                                      (E) 16






7. Dolly accidentally broke the mirror into pieces. How many pieces have exactly four sides?



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

8. In the figure on the right we see a necklace of six beads. Which one is the same necklace?



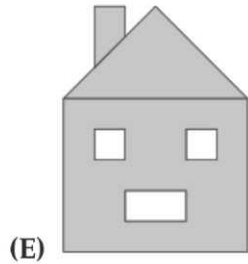
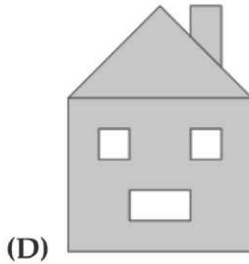
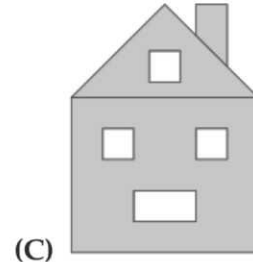
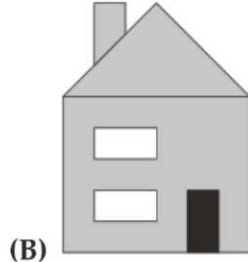
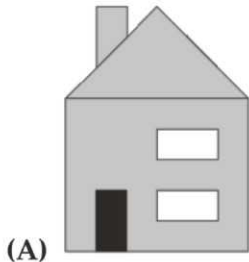
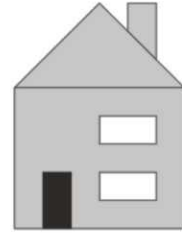
- (A)                                       (B)                                       (C)   
 (D)                                       (E) 

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## SECTION TWO - (4 points problems)

9. The picture shows the front of the house of Ann. The back of her house has three windows and no door. What view does Ann see when she looks at the back of her house?



10.  $\bullet + \bullet + \bullet + \bullet + \blacksquare = \blacksquare + \blacksquare + \blacksquare$   
Which one is true?

(A)  $\bullet = \blacksquare$

(B)  $\bullet + \bullet + \bullet = \blacksquare$

(C)  $\blacksquare + \blacksquare + \blacksquare = \bullet$

(D)  $\blacksquare + \blacksquare = \bullet$

(E)  $\bullet + \bullet = \blacksquare$

11. Balloons are sold in packets of 5, 10 and 25. Marius buys exactly 70 balloons. What is the smallest number of packets he could buy?

(A) 3

(B) 4

(C) 5

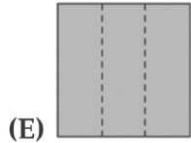
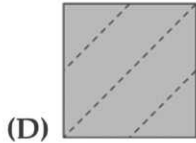
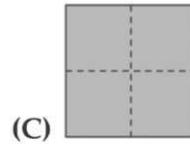
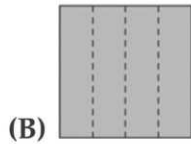
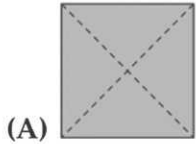
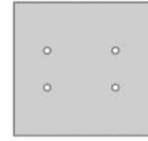
(D) 6

(E) 7

# KSF 2017 - Problems Ecolier (Class 3 & 4)

Time Allowed: 120 minutes

12. Bob folded a piece of paper. He cut exactly one hole in the paper with a hole puncher. Then he unfolded the piece of paper and saw the result as shown in the picture. How had Bob folded his piece of paper?



13. There is a tournament at the pool. First 13 children signed up and then another 19 signed up. Six teams with an equal number of members are needed for the tournament. At least how many more children need to sign up so that the six teams can be formed?

- (A) 1  
(D) 4

- (B) 2  
(E) 5

- (C) 3

14. Numbers are placed in the cells of the 4 x 4 square shown in the picture. Mary finds the 2 x 2 square where the sum of the numbers in the four cells is the largest. What is that sum?

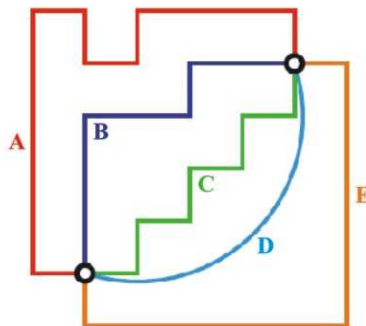
1	2	1	3
4	1	1	2
1	7	3	2
2	1	3	1

- (A) 11  
(D) 14

- (B) 12  
(E) 15

- (C) 13

15. Which of the routes is the longest?



- (A) A  
(D) D

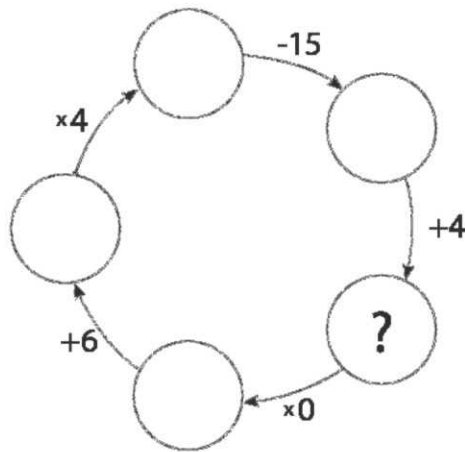
- (B) B  
(E) E

- (C) C

# KSF 2017 - Problems Ecolier (Class 3 & 4)

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16. Which number should be written in the circle containing the question mark?



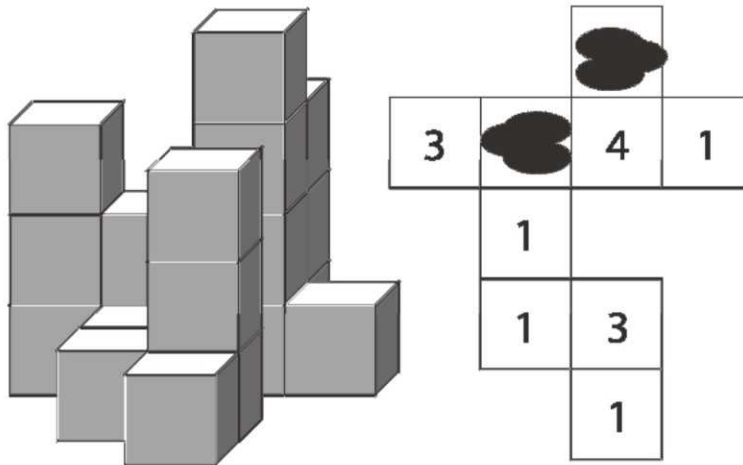
(A) 10  
(D) 13

(B) 11  
(E) 14

(C) 12

## SECTION THREE - (5 points problems)

17. The picture shows a group of building blocks and a plan of the same group. Some ink has dropped onto the plan. What is the sum of the numbers under the ink blots?



(A) 3  
(D) 6

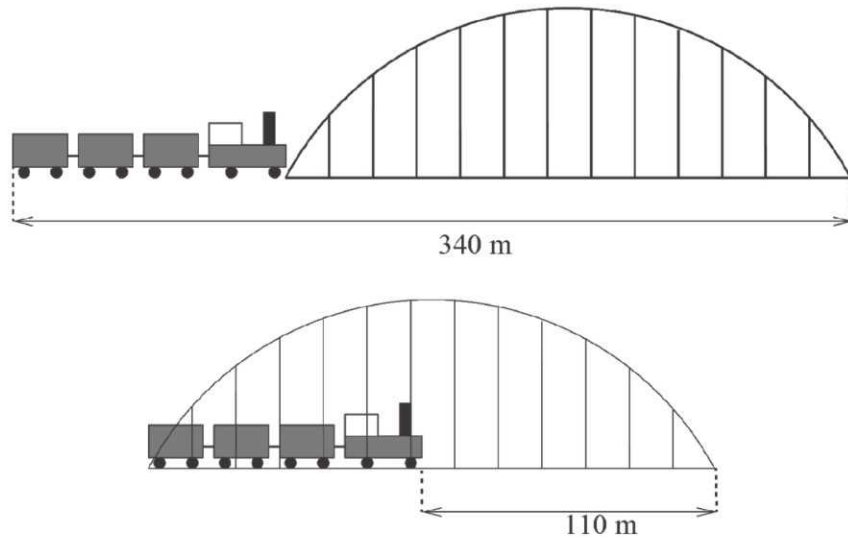
(B) 4  
(E) 7

(C) 5

## KSF 2017 - Problems Ecolier (Class 3 & 4)

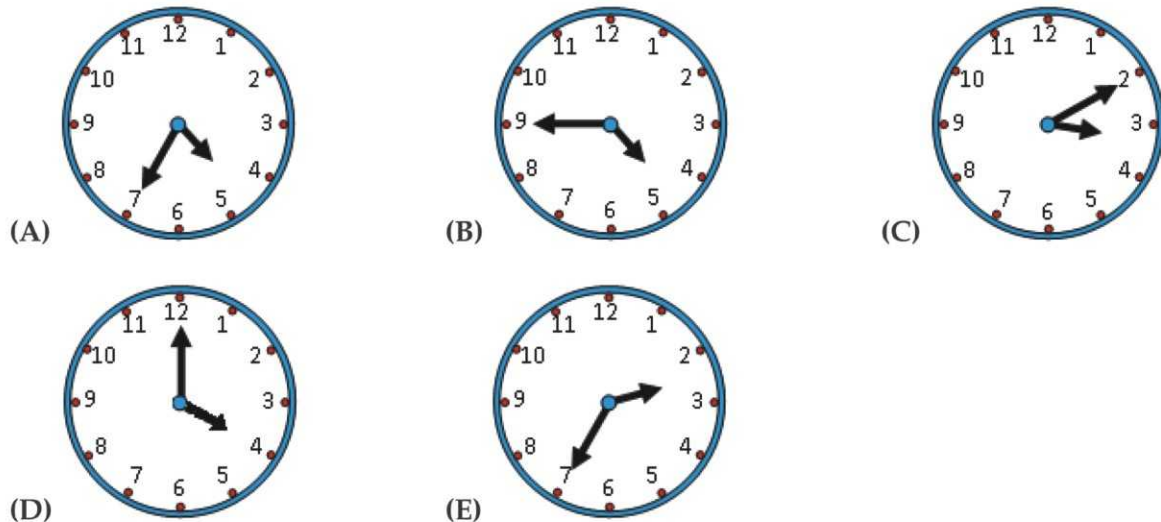
Time Allowed: 120 minutes

18. How long is the train?



- (A) 55 m                                      (B) 115 m                                      (C) 170 m  
 (D) 220m                                      (E) 230 m

19. George starts training at five in the afternoon. The journey from his house to the bus stop takes 5 minutes. The bus journey takes 15 minutes. It takes him 5 minutes to go from the bus stop to the field. The bus runs every 10 minutes from six in the morning. At what time at the latest does he have to leave his house to arrive at the field exactly on time?



20. David wants to cook 5 dishes on a stove with only 2 burners. The times needed to cook the 5 dishes are 40 min, 15 min, 35 min, 10 min and 45 min .What is the shortest time in which he can do it? (He may only remove a dish from the stove when it is cooked.)

- (A) 60 min                                      (B) 70 min                                      (C) 75 min  
 (D) 80 min                                      (E) 85 min




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21. Four brothers have eaten 11 cookies in total. Each of them has eaten at least one cookie and no two of them have eaten the same number of cookies. Three of them have eaten 9 cookies in total and one of them has eaten exactly 3 cookies. How many cookies have been eaten by the boy who has eaten the largest number of cookies?

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

22. Zosia has hidden a smiley  in some of the cells of the table. In some of the other cells she writes the number of smileys in the neighbouring cells as shown in the picture. Two cells are said to be neighbouring if they share a common side or a common corner. How many smileys has she hidden?

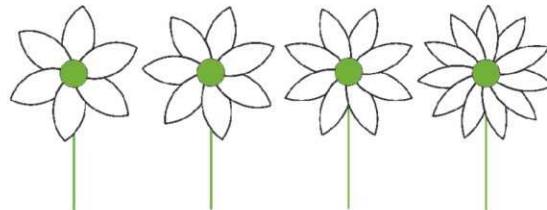
	3	3	
2			
		2	
	1		

- (A) 4                                      (B) 5                                      (C) 7  
 (D) 8                                      (E) 11

23. Ten bags each contain a different number of candies from 1 to 10. Five boys each took two bags of candies. Alex got 5 candies, Bob got 7 candies, Charles got 9, and Dennis got 15. How many candies did Eric get?

- (A) 9                                      (B) 11                                      (C) 13  
 (D) 17                                      (E) 19

24. Kate has 4 flowers, one with 6 petals, one with 7 petals, one with 8 petals and one with 11 petals. Kate tears off one petal from three flowers. She does this several times, choosing any three flowers each time. She stops when she can no longer tear one petal from three flowers. What is the smallest number of petals which can remain?



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