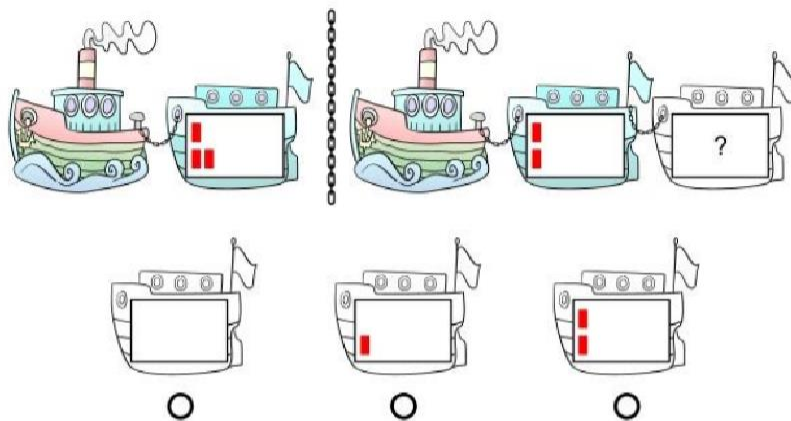




**Practice Questions for Cognitive Abilities Test™ (CogAT®) Form 7 and 8  
Primary Battery (K – 1st Grade)  
Quantitative - Number Puzzles - 66 Questions  
Set 1**

In this Number Puzzle Subtest, children are shown 2 tugboats. Each must be pulling the same number of red “boxes.” The child must identify which tugboat should replace the boat(s) with a question mark so that the tugboat to the left of the chain is pulling the same number of red boxes as the tugboat to the right of the chain.

**Parent Say to Child:** Look at the example below. Do you see how the first tugboat is pulling a tugboat with 3 red boxes? Now look at the second tugboat. It is pulling one boat with 2 red boxes. We need to add another boat where this question mark is so this tugboat will be pulling the same number of red boxes as the first tugboat. Which boat should we add so the second tugboat will be pulling 3 red boxes? The boat over the second bubble is the right answer.



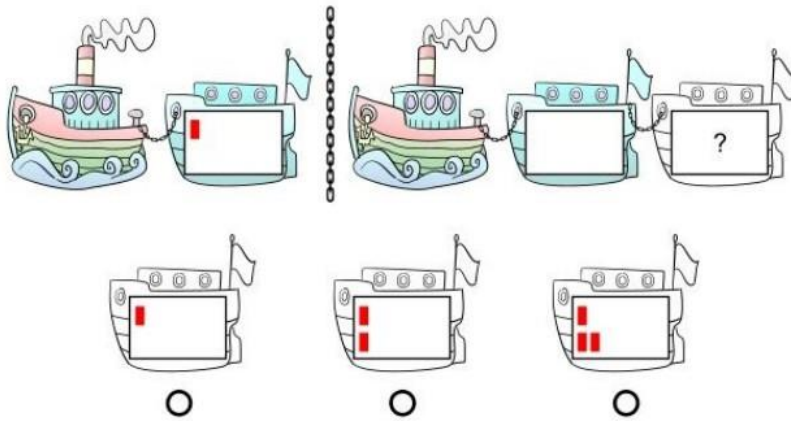
Questions 1 – 33 – Grade K  
Questions 34 – 66 – Grade 1

[note: It would help your child to start the easiest questions even if your child is in 1<sup>st</sup> grade. If your K-level child can answer Grade 1 questions without frustration, go ahead and do them].

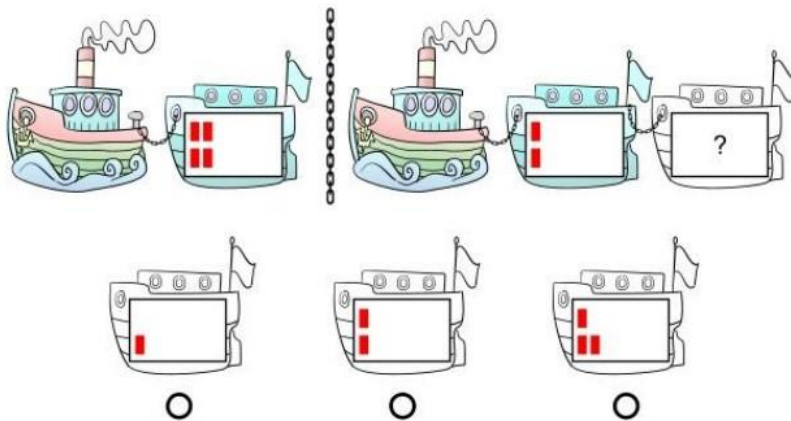
## Questions 1 – 33 – Kindergarten

Now let's do some more number puzzles. Can you choose the boat that should replace the boat that has the question mark?

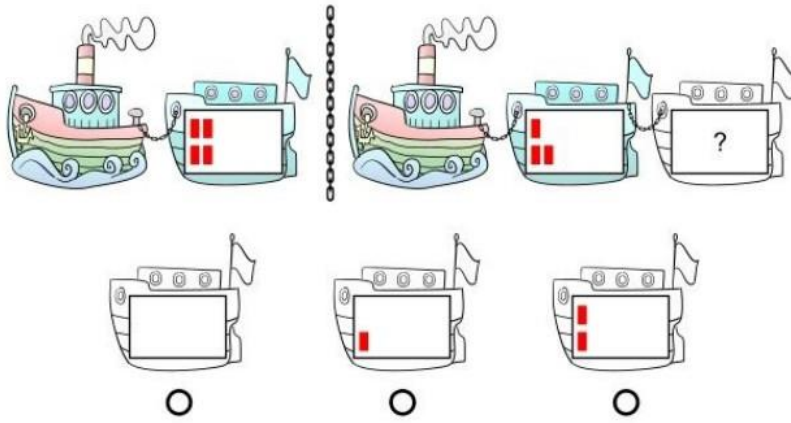
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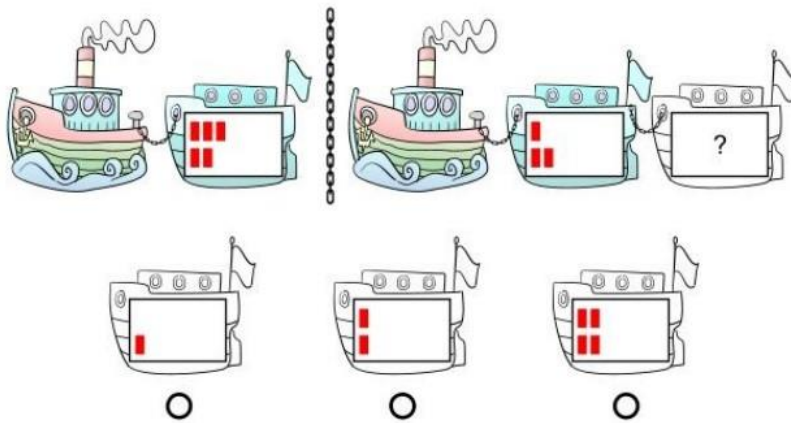
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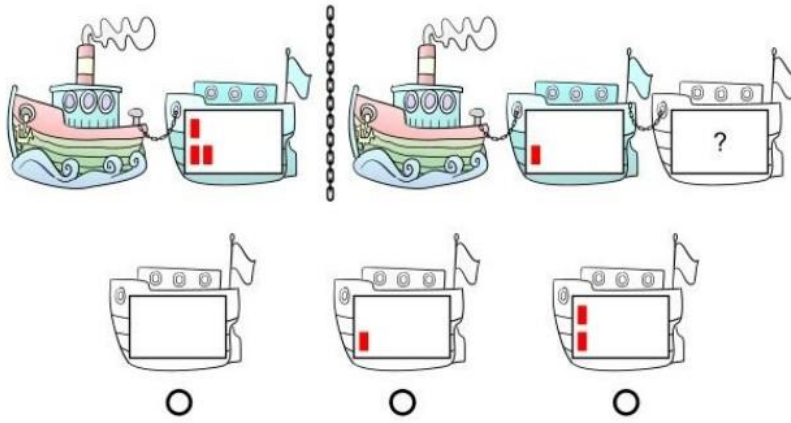
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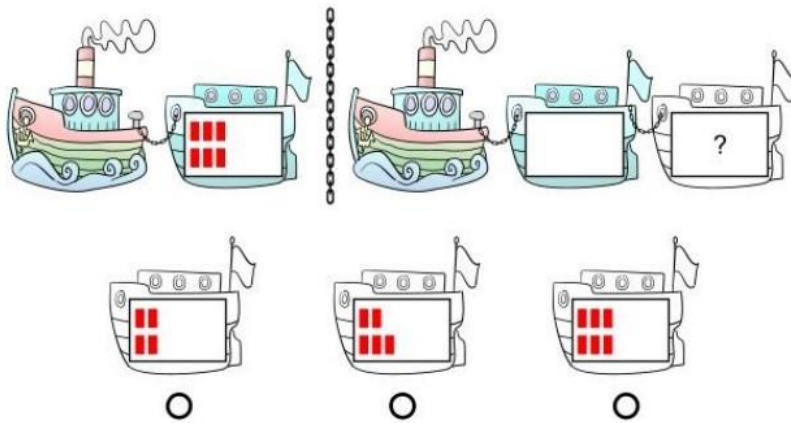
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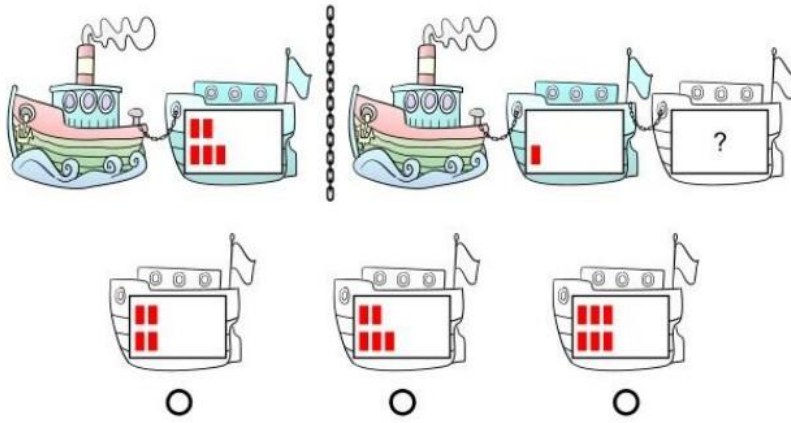
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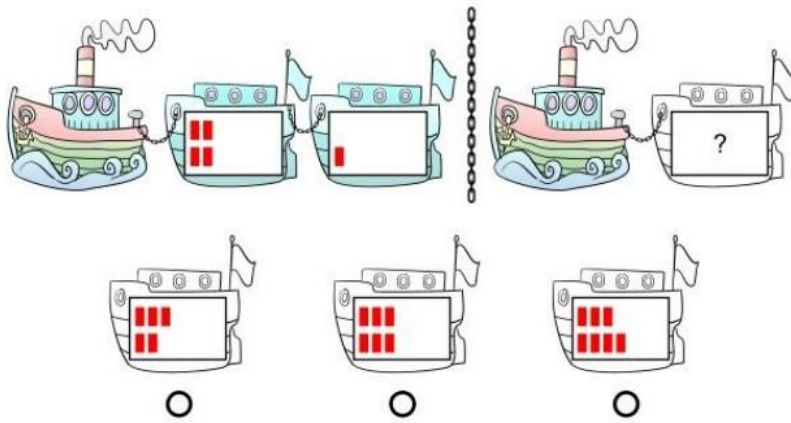
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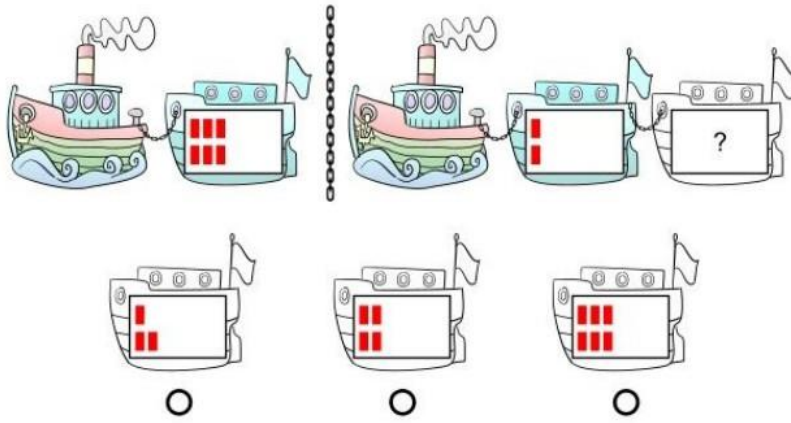
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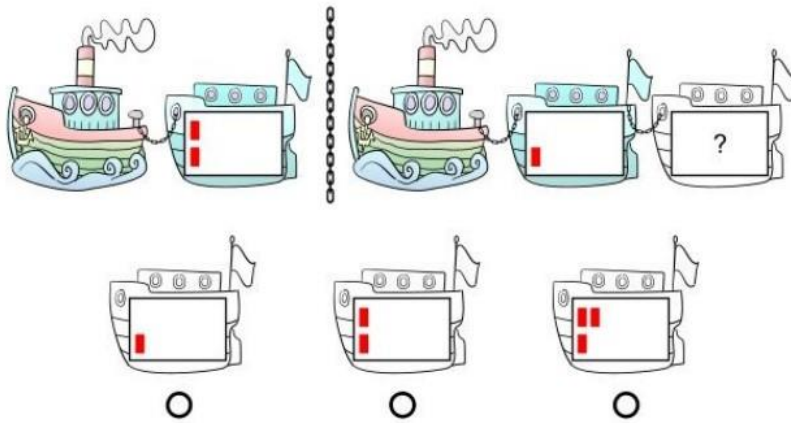
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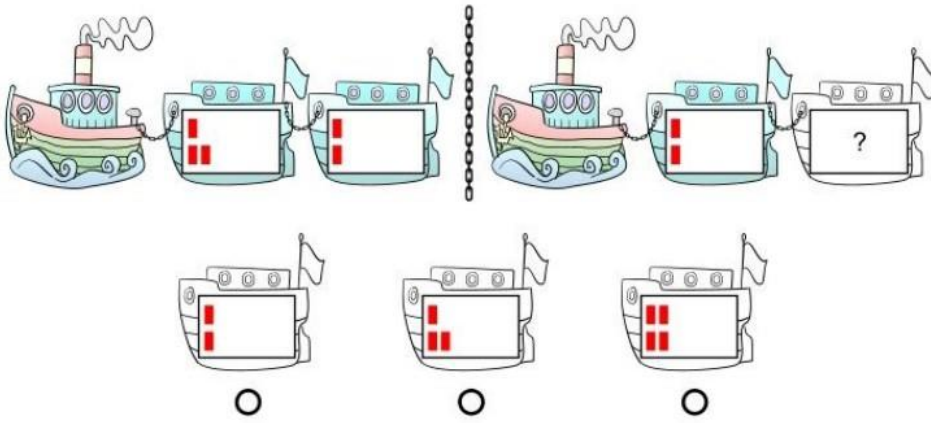
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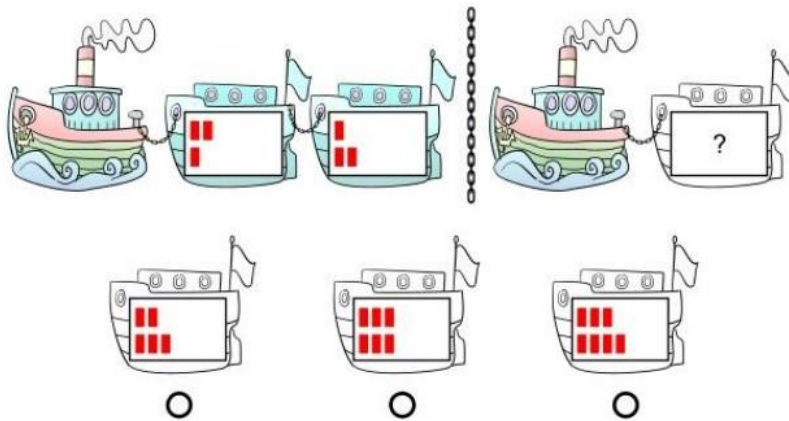
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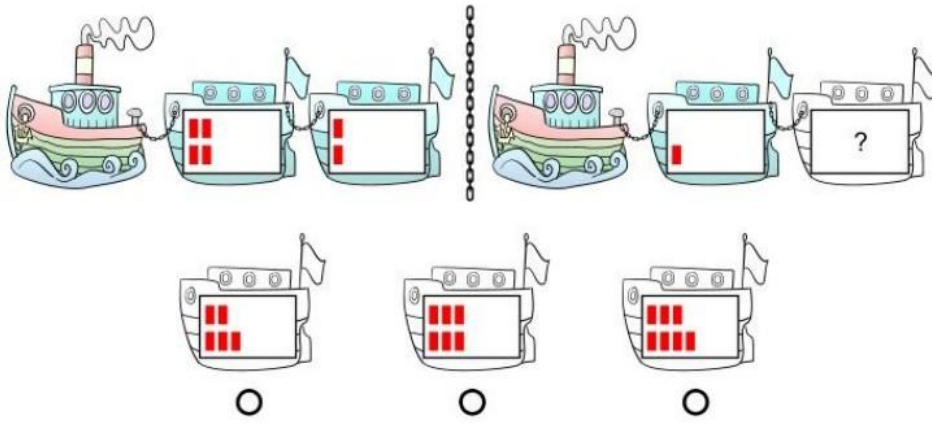


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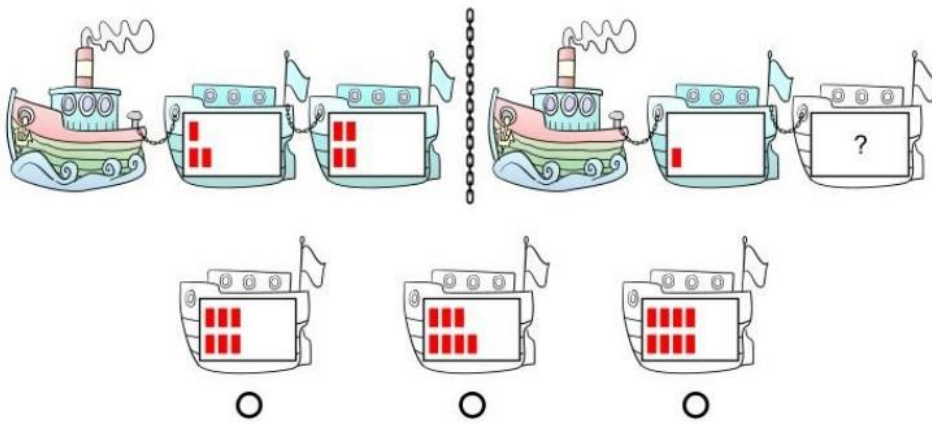




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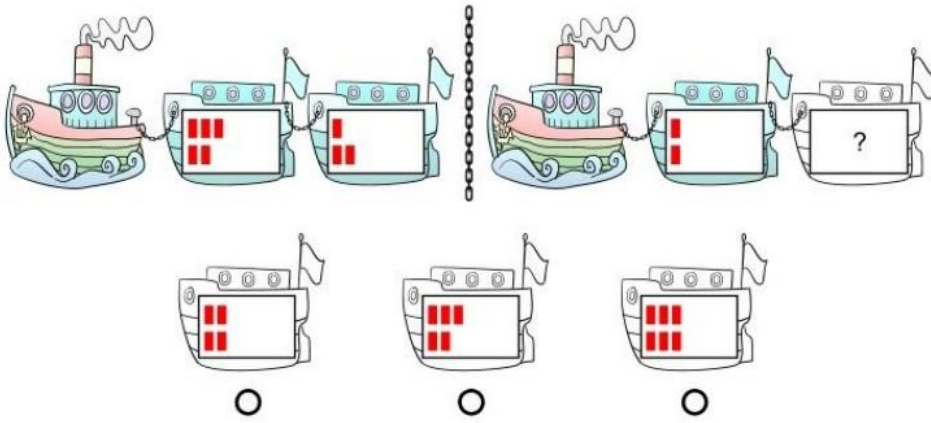


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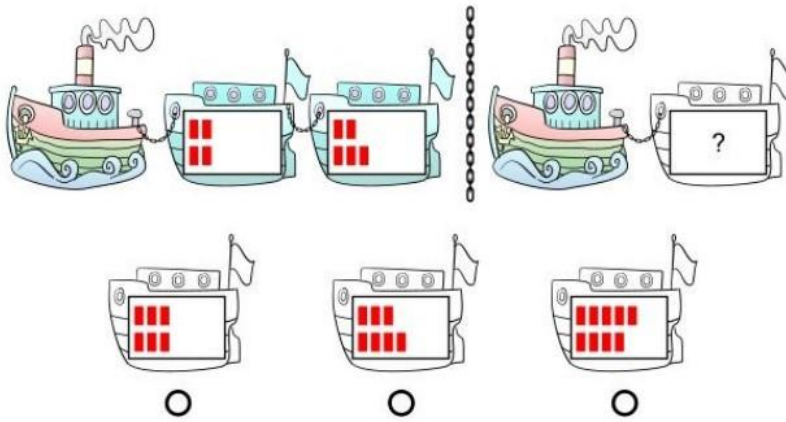




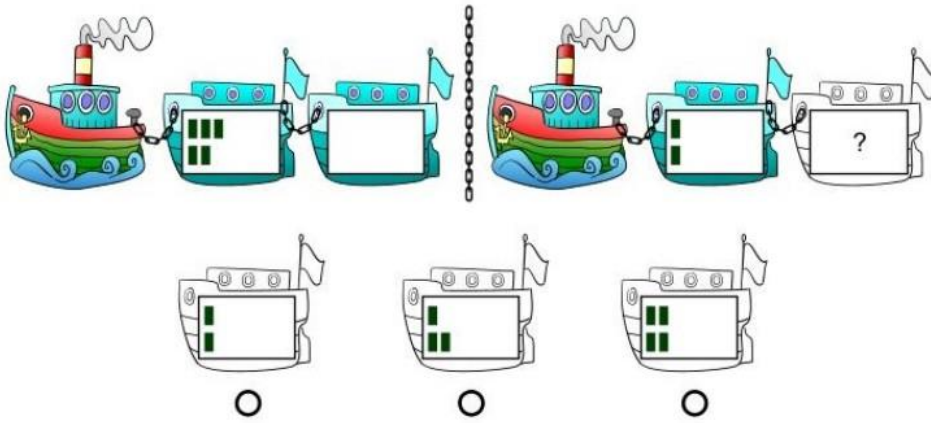
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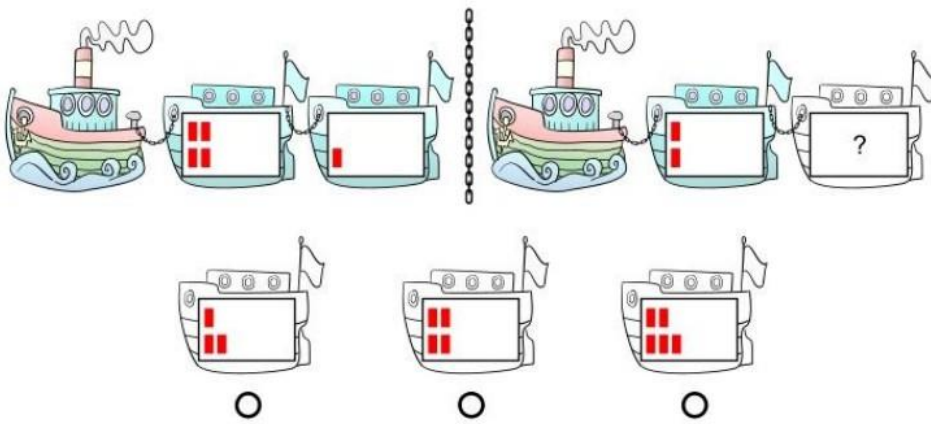
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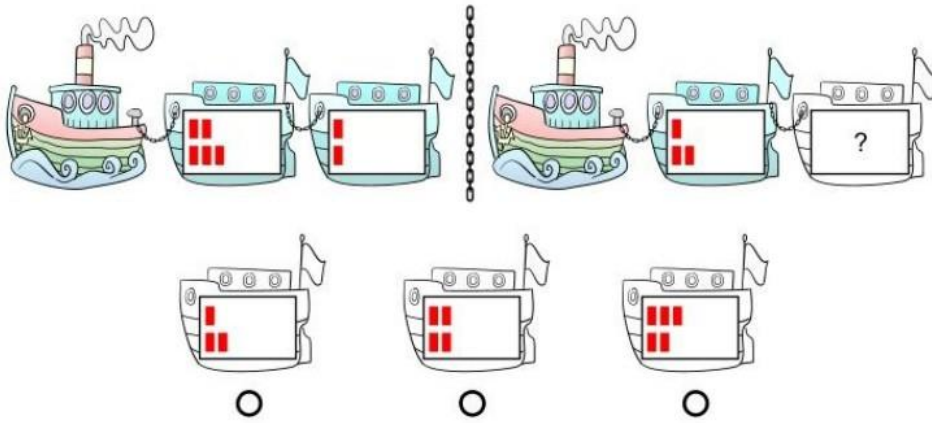
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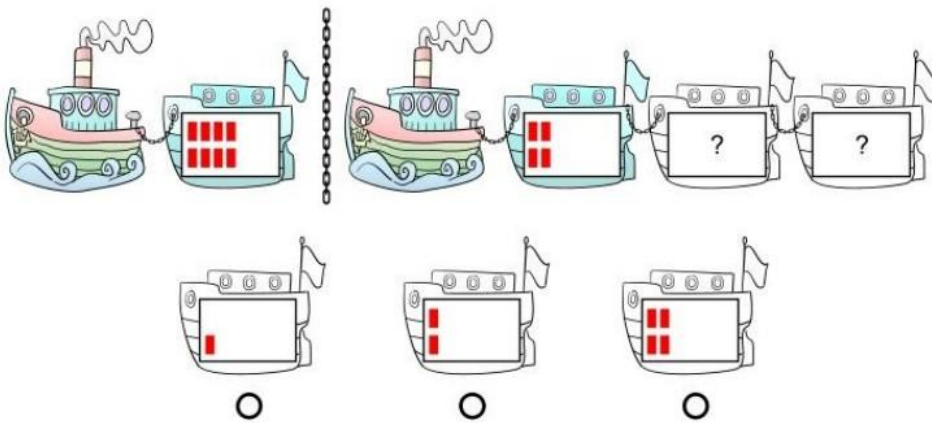
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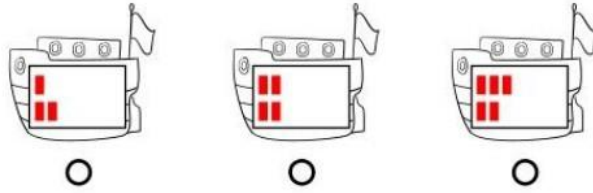
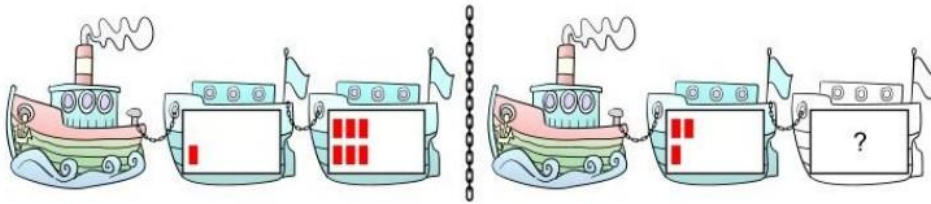
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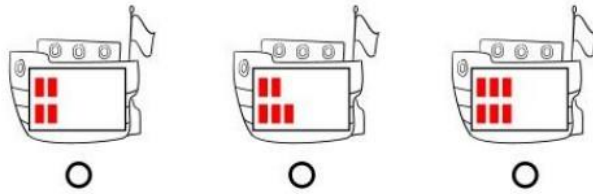
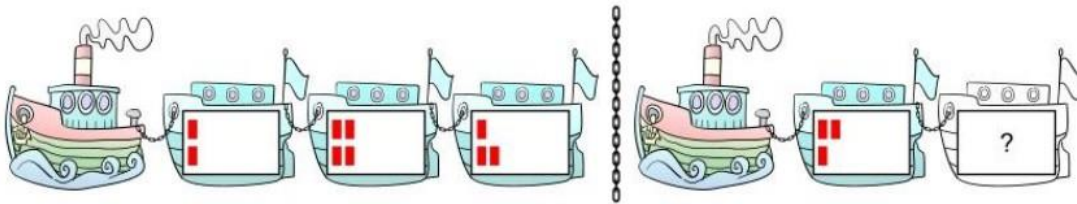
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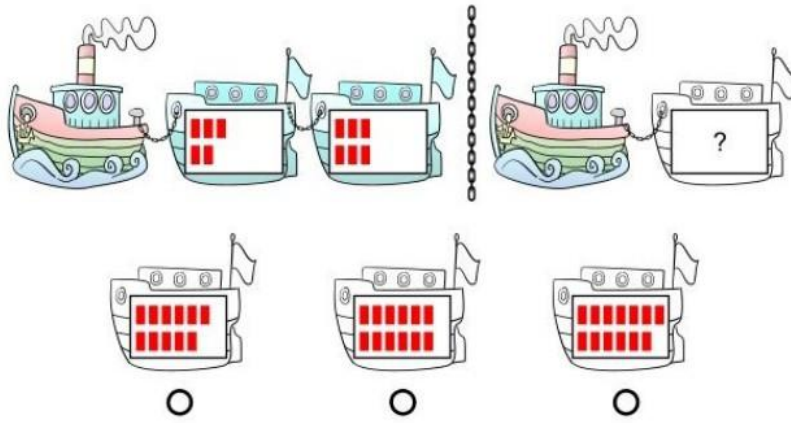
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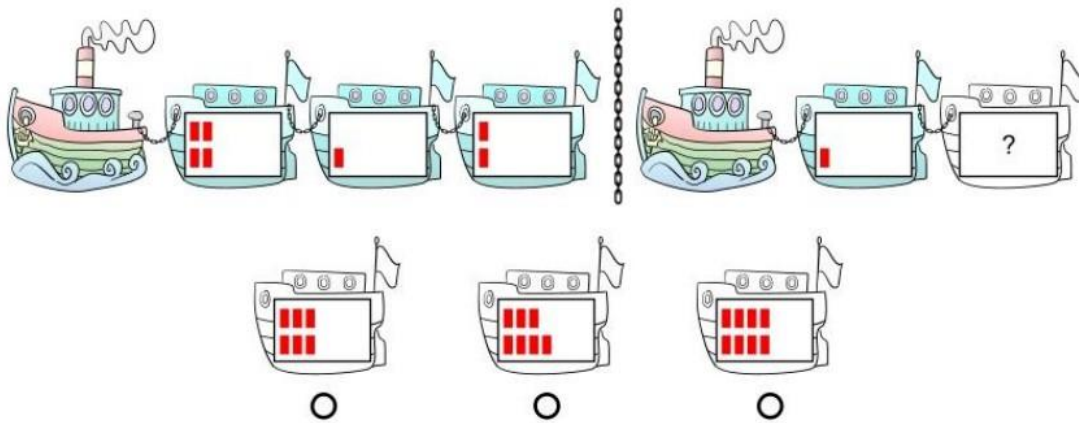
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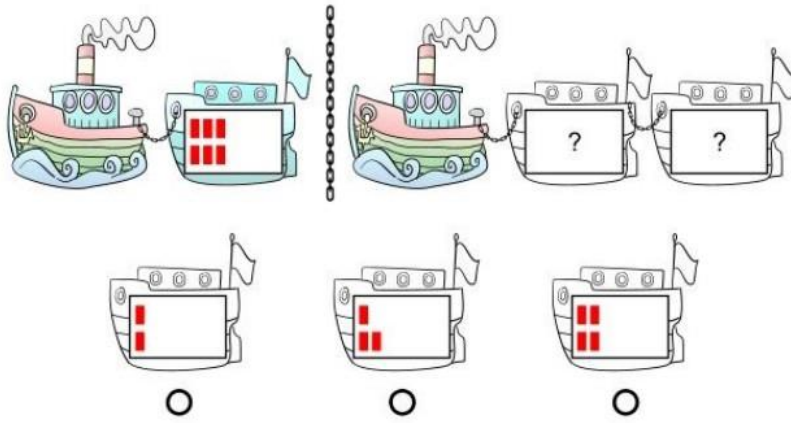
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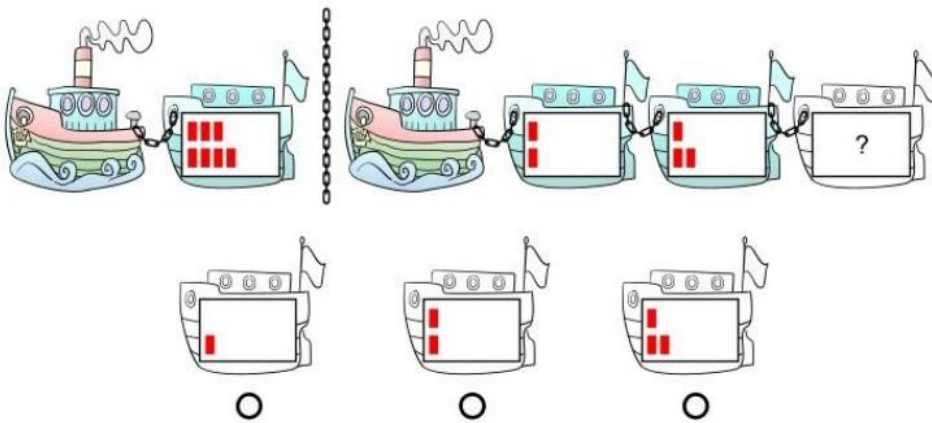
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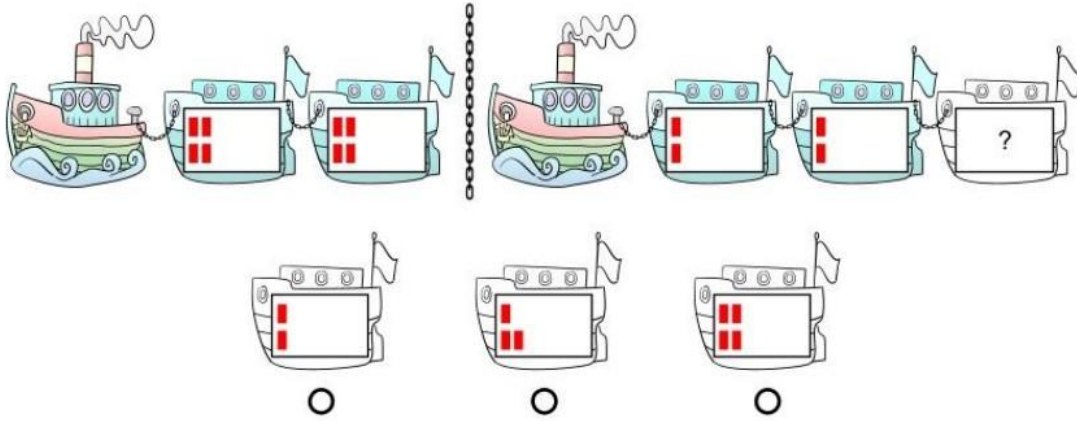
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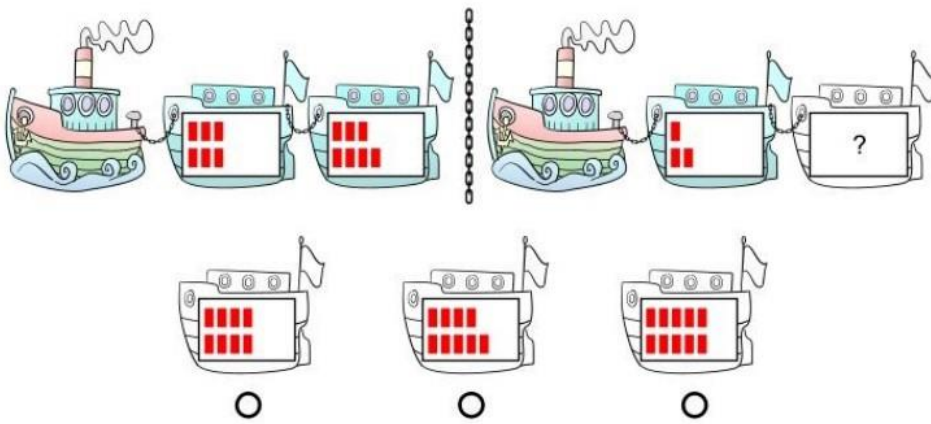
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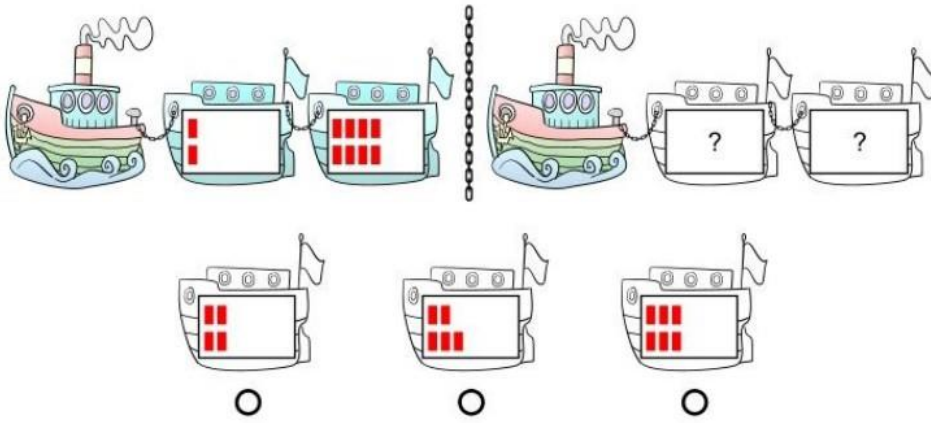


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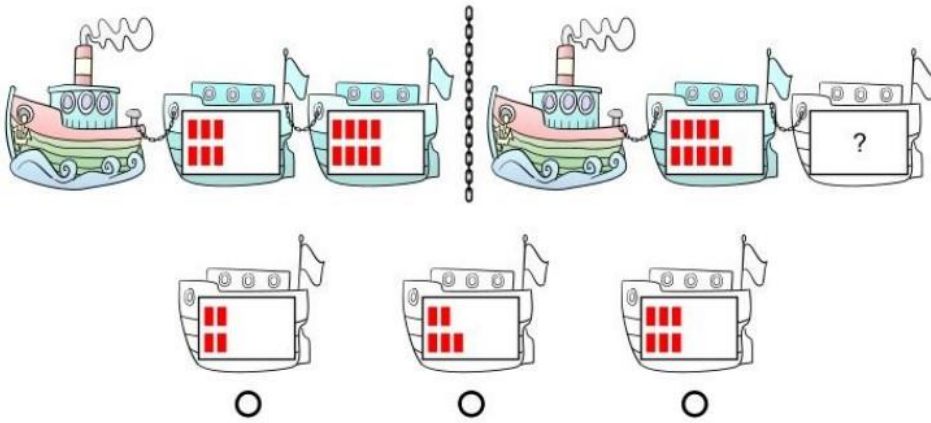




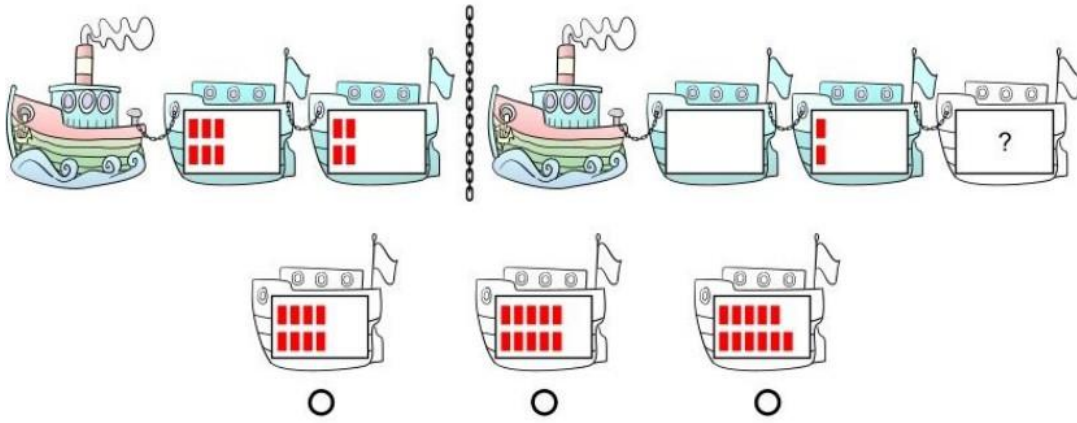
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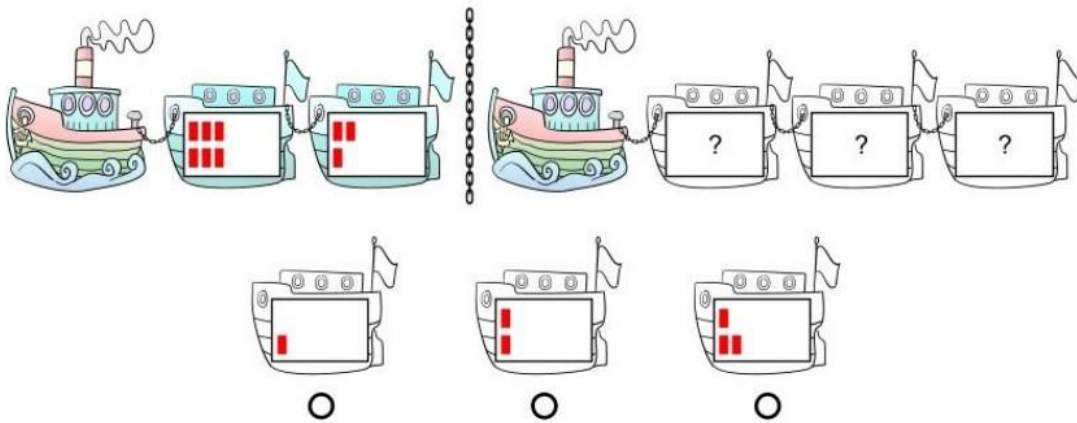
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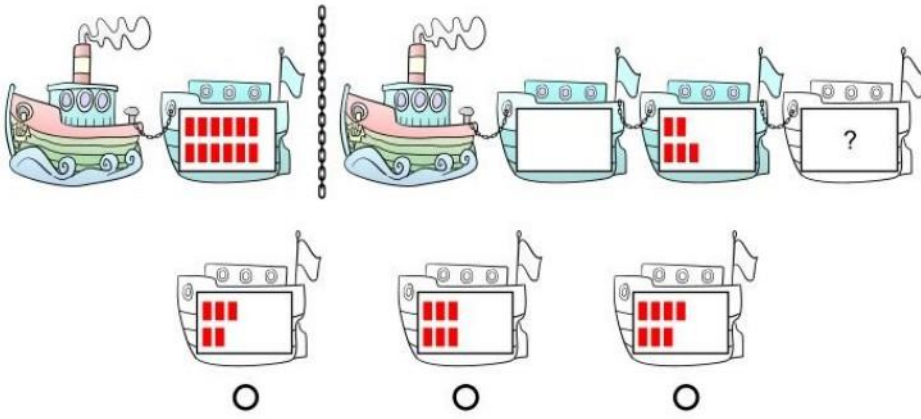
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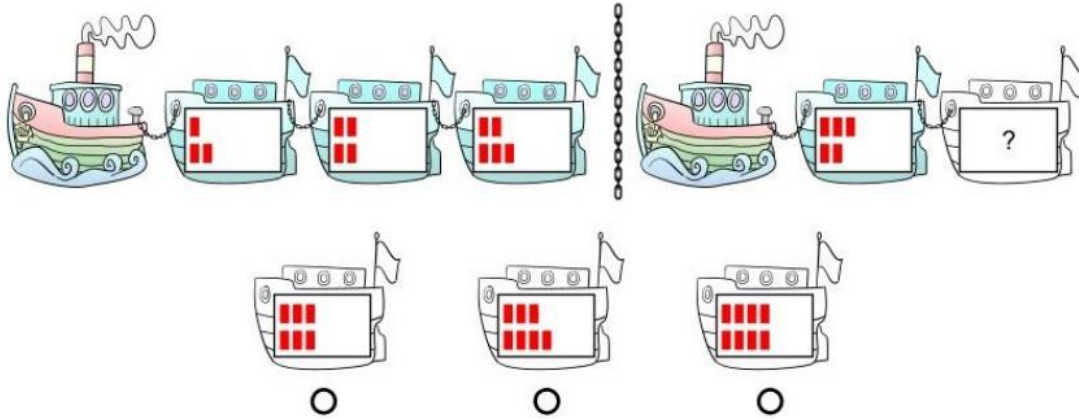


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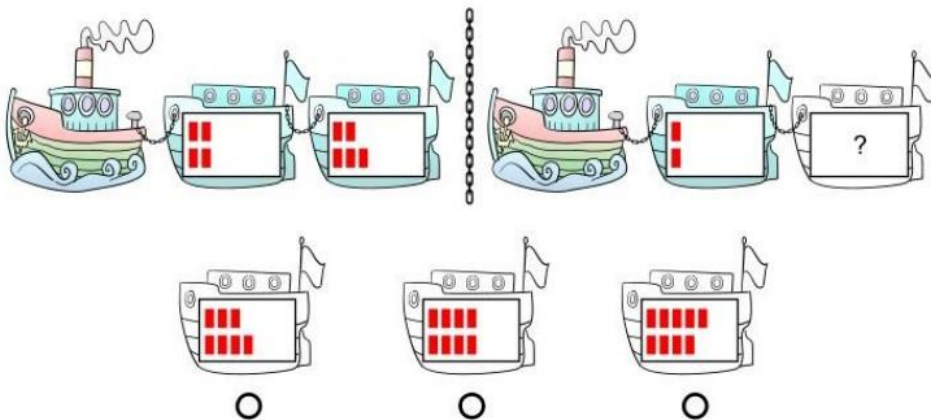


Questions 34 – 66 – 1<sup>st</sup> Grade

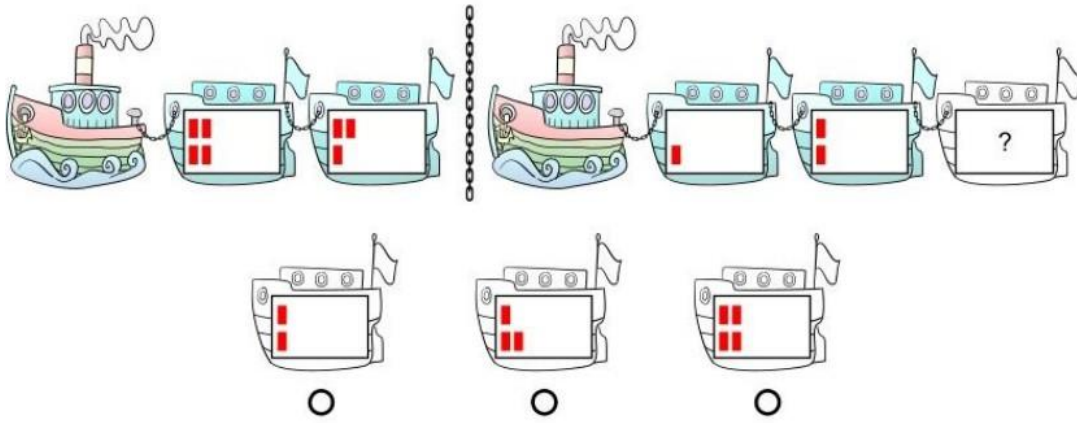
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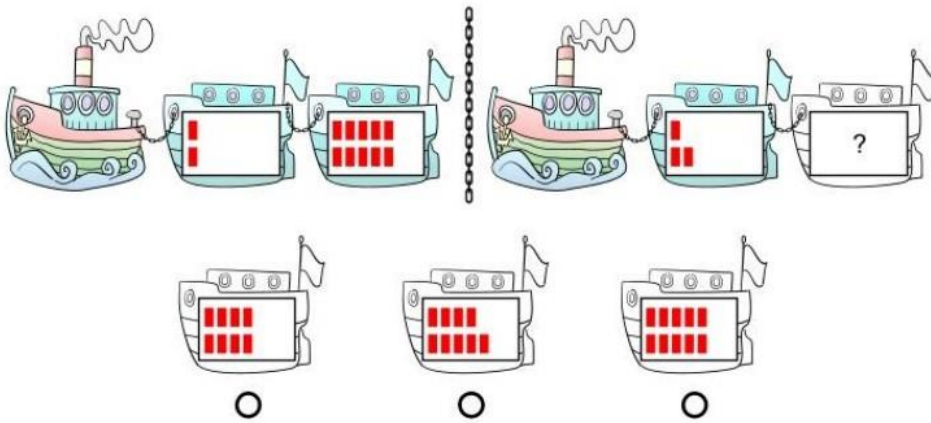
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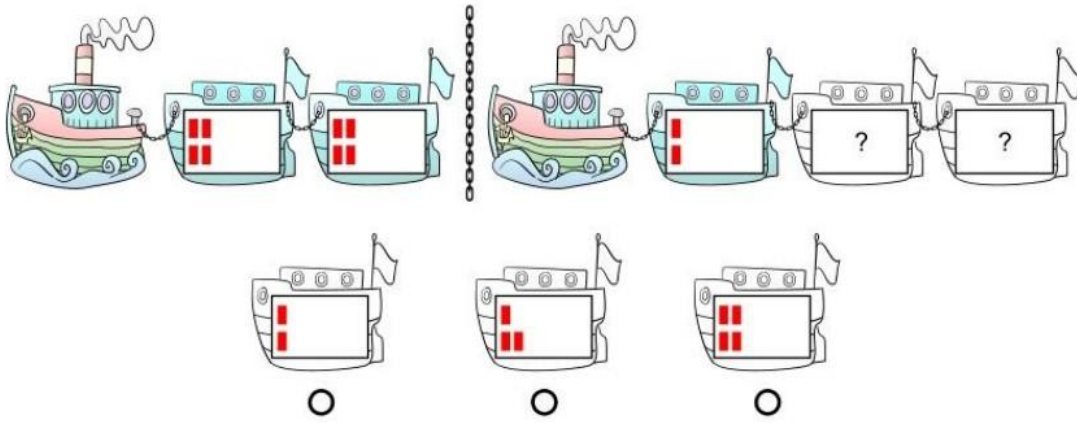
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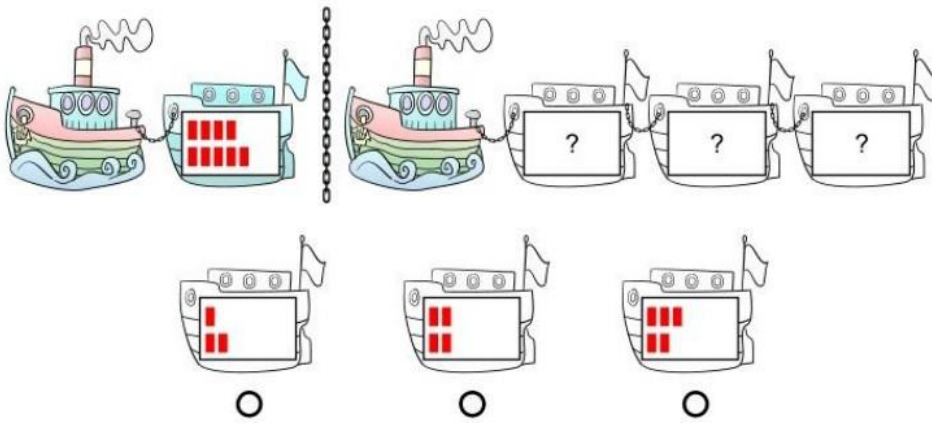
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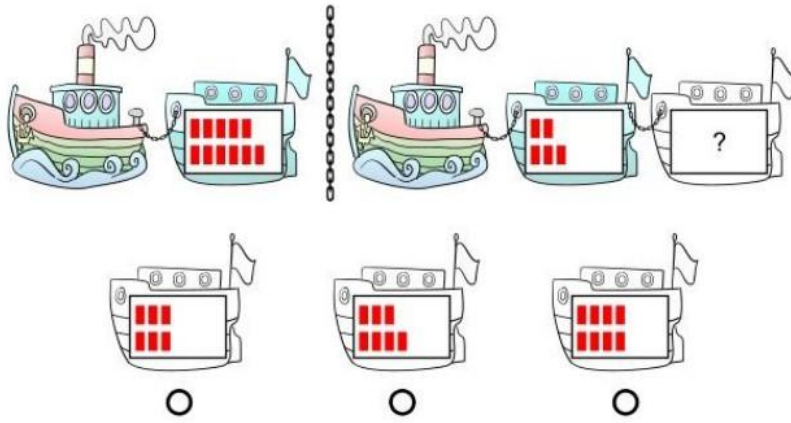
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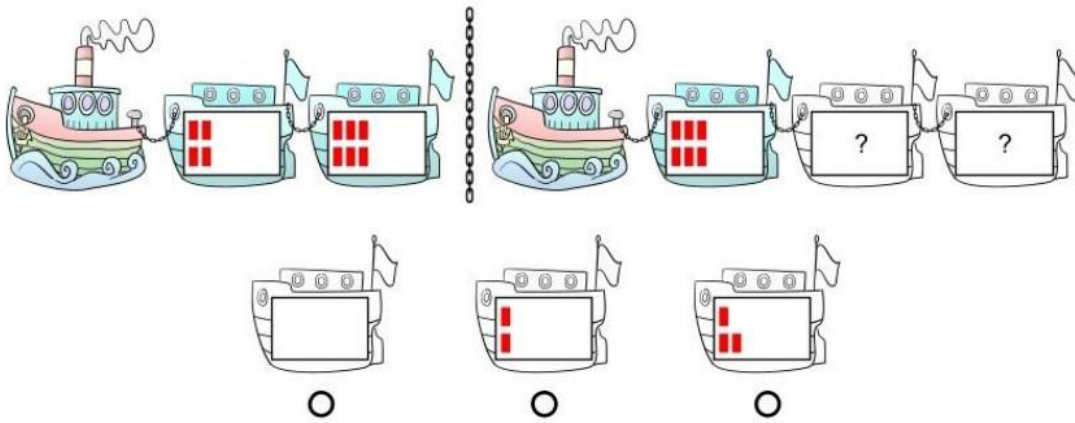
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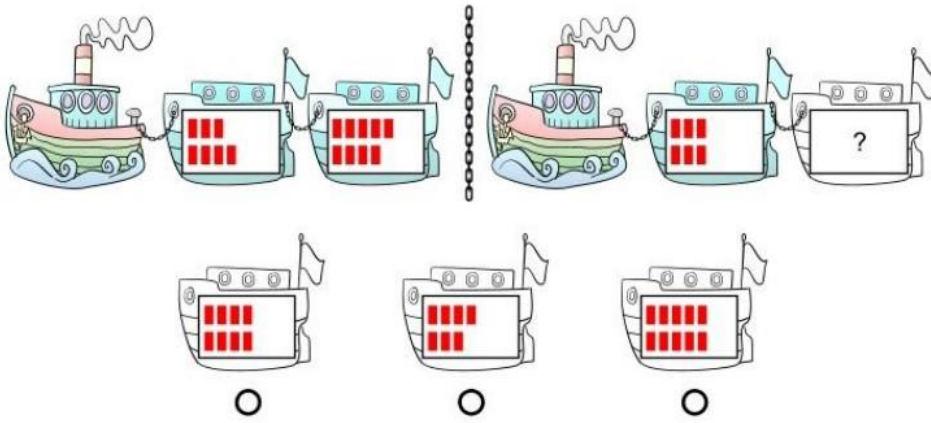


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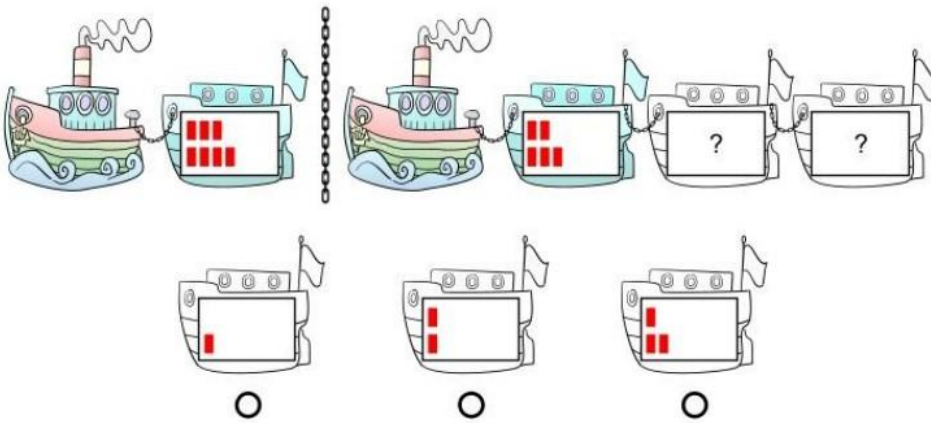




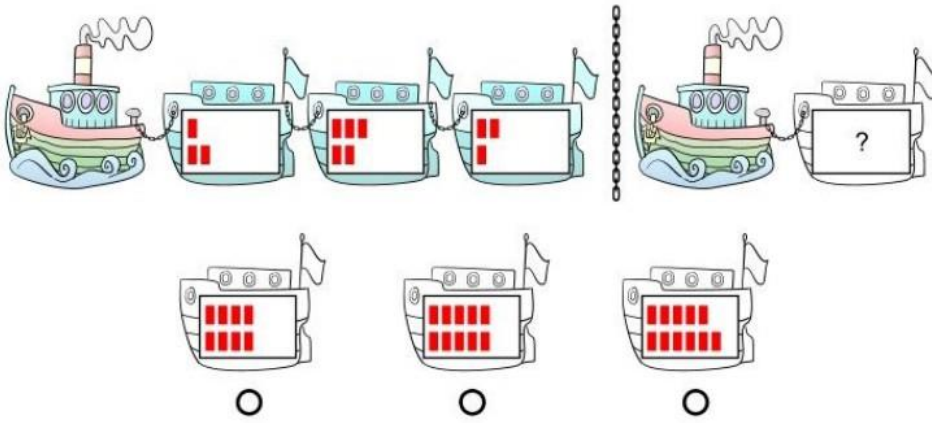
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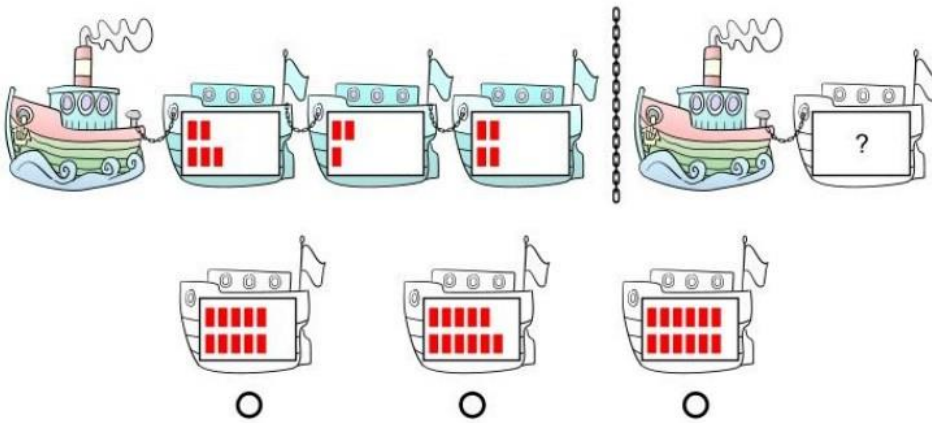
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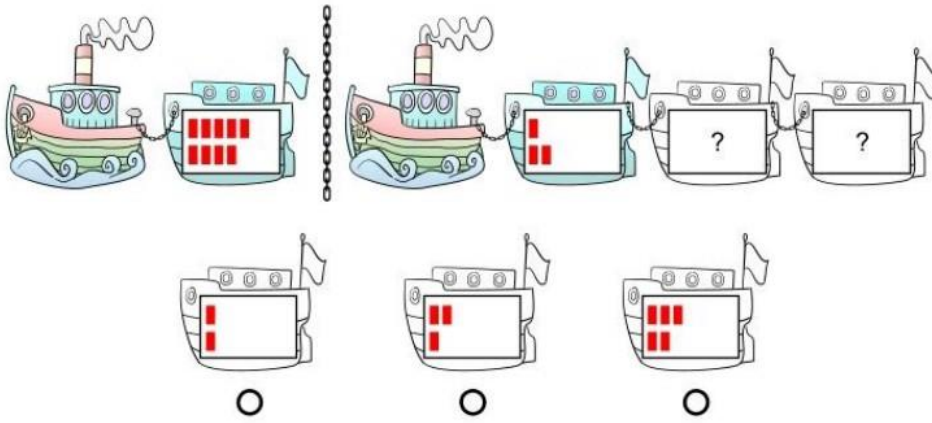
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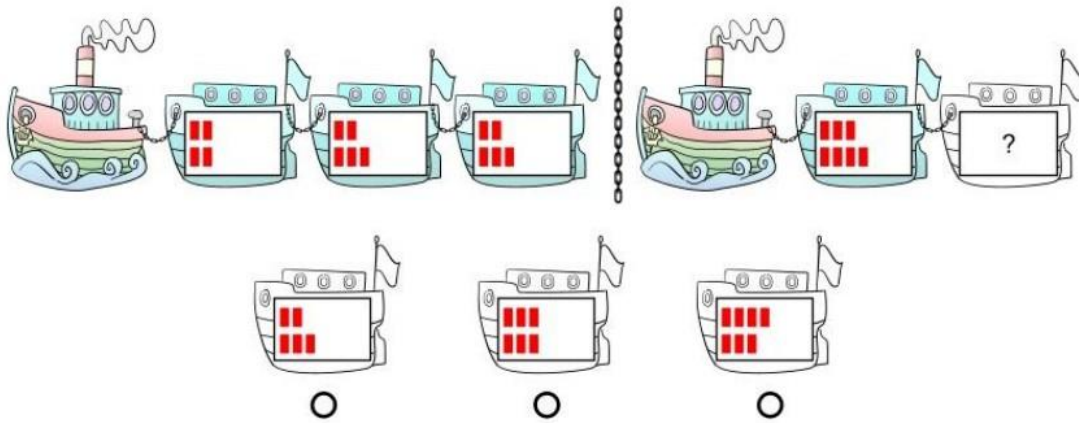
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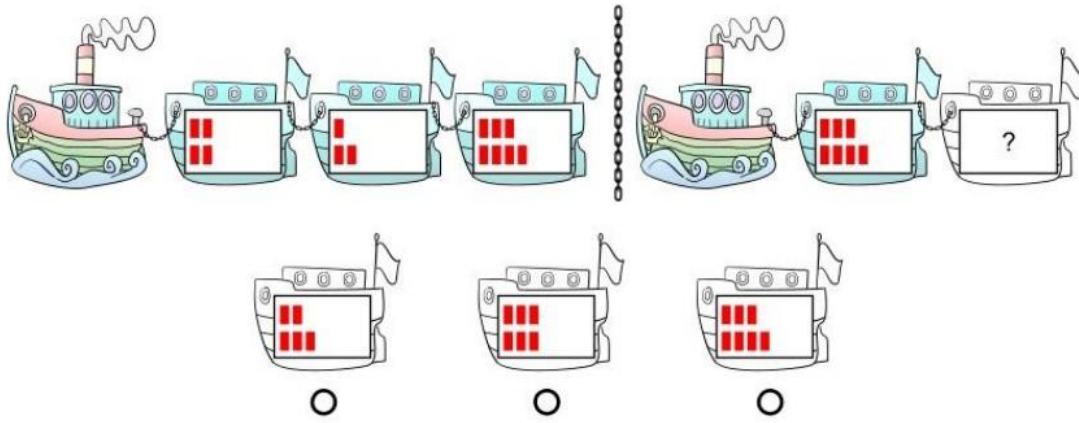
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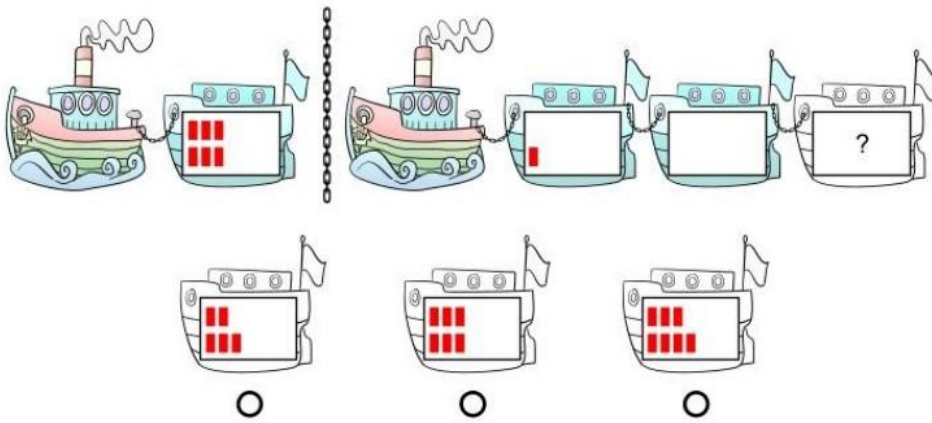
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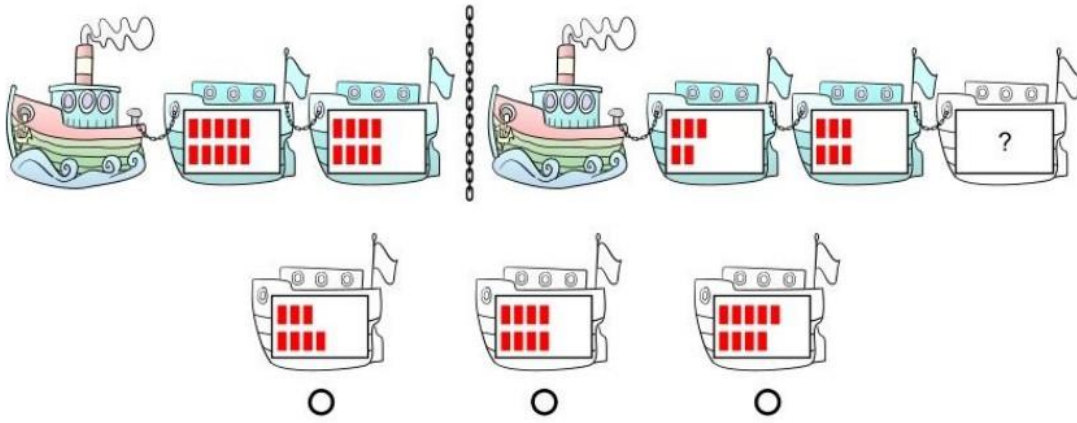
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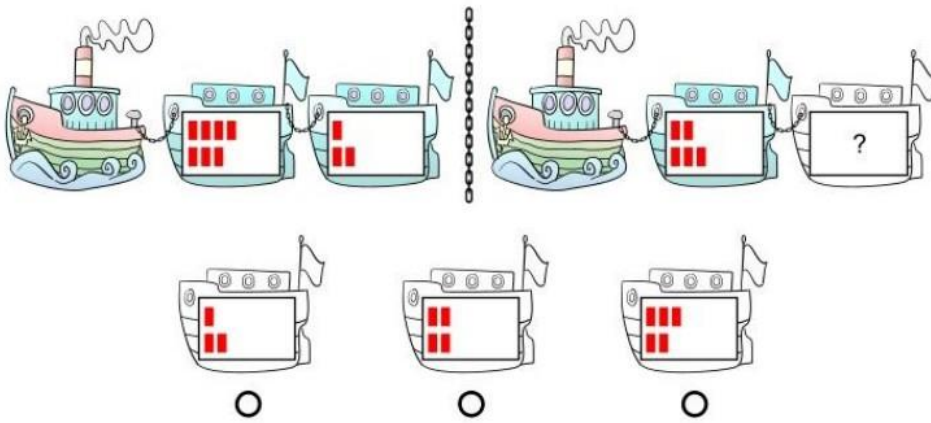
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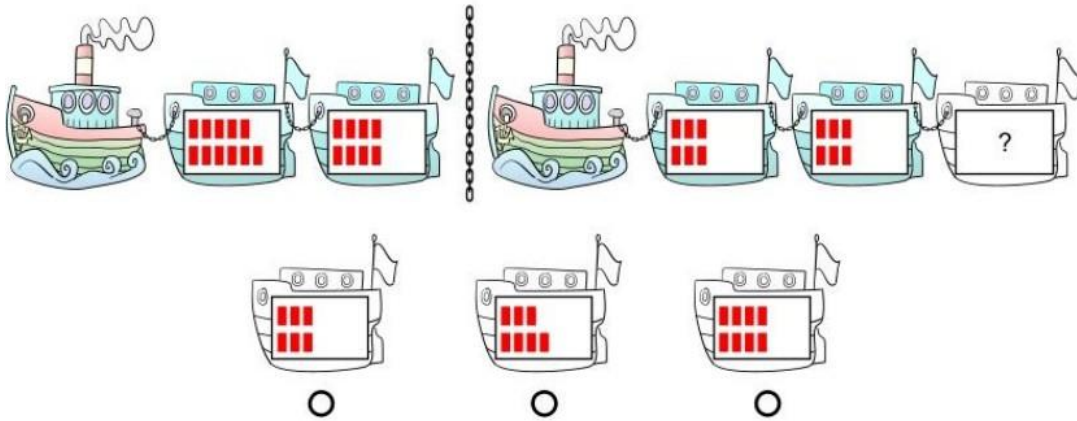
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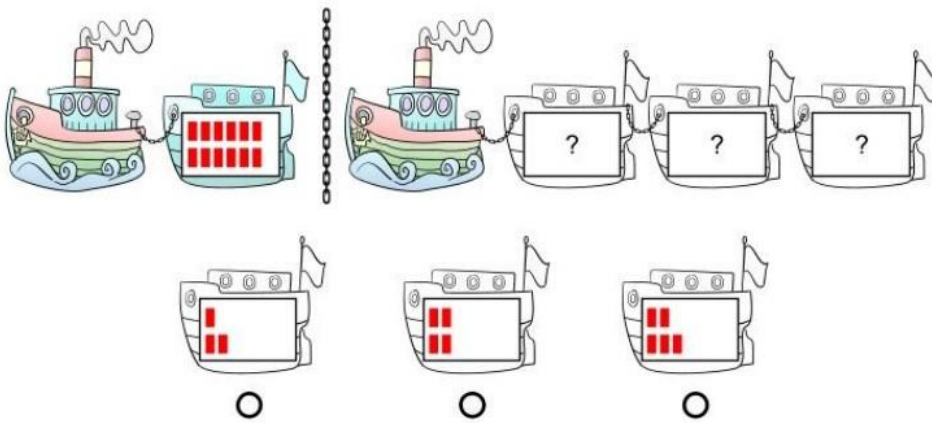
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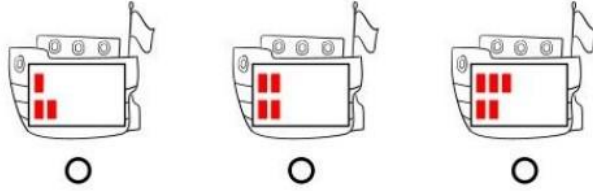
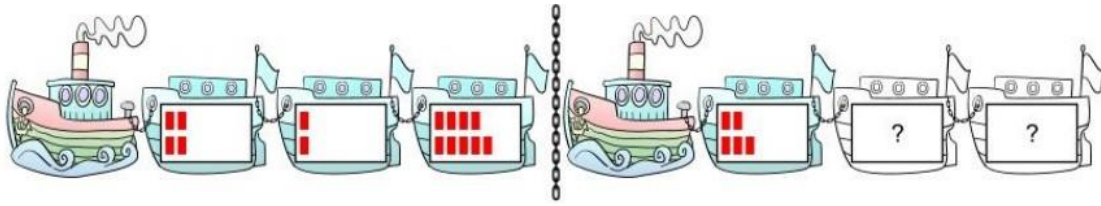


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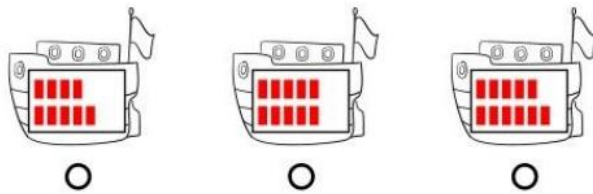
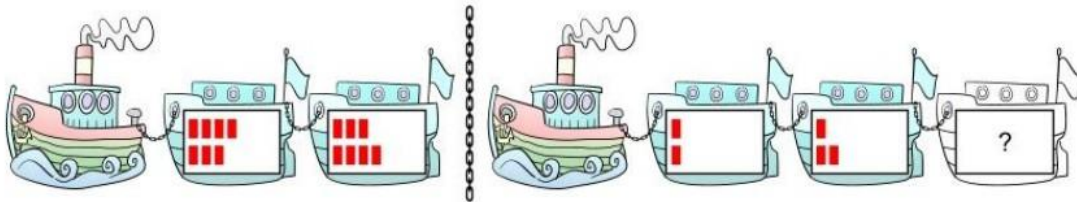




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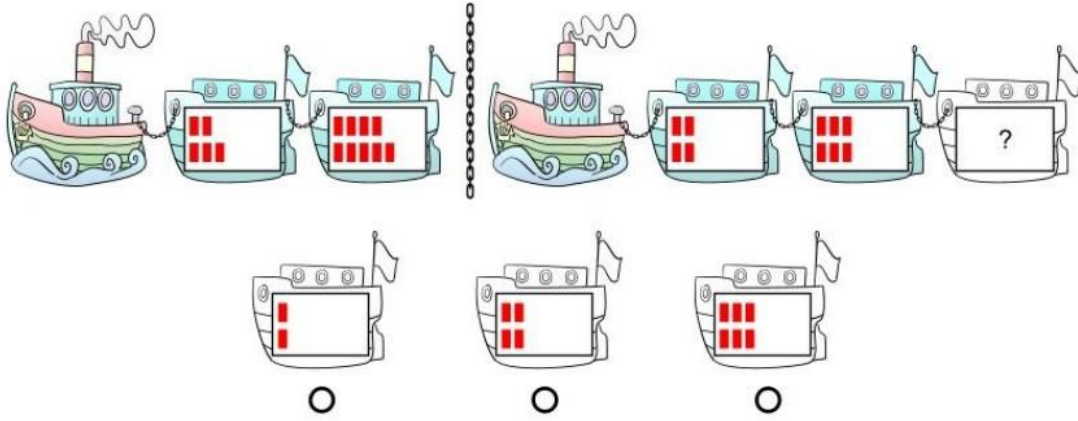


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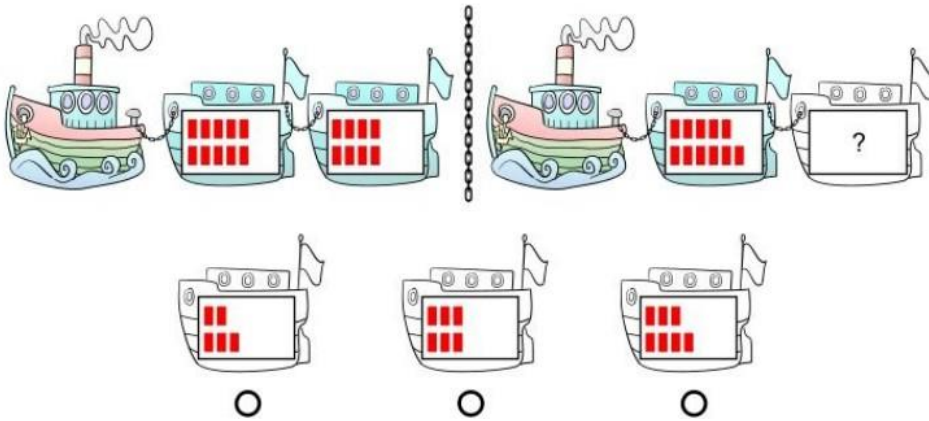




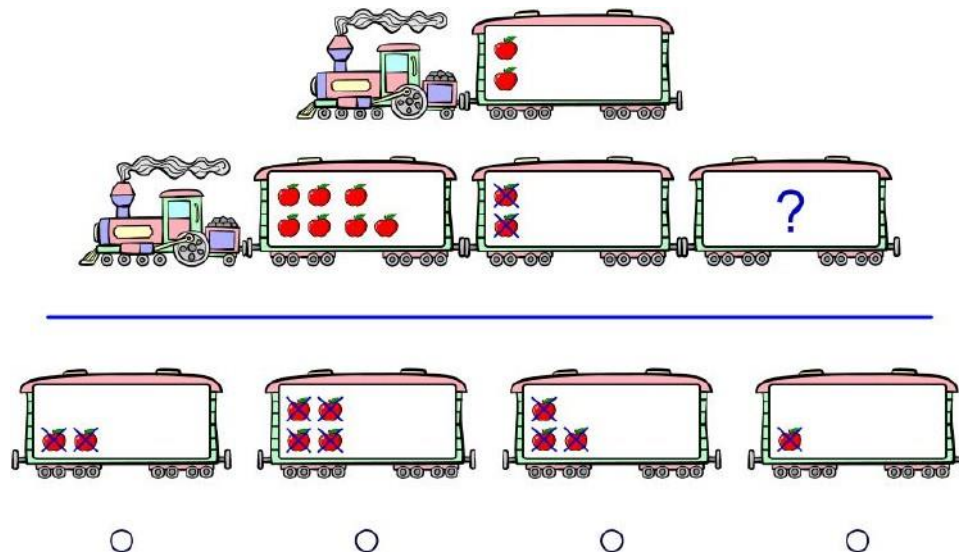
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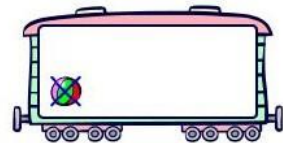
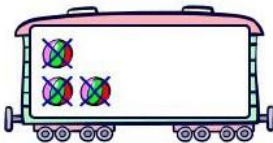
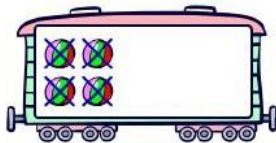
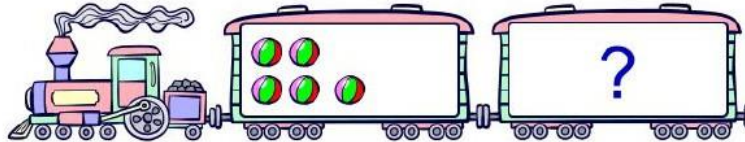
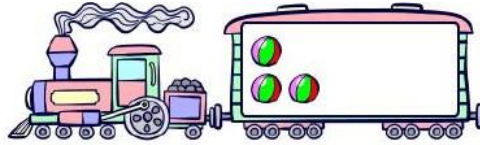


58. *Say:* Let's try something different. The trains below are pulling cars that carry different numbers of items. For example, the car on top has 2 apples, or 2 items. We will want both trains to be carrying the same number of items. If you see an X over some items, that means we need to take them away. Look at the trains below. The second train is carrying 7 apples in the first car and then we take away 2 apples in the second car. Which car on the bottom carries the number of apples we need to add in or take away so that both trains will be carrying the same number of apples? **The 3<sup>rd</sup> car.**  $2 = 7 - 2 - 3$ .

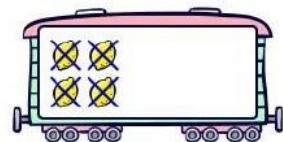
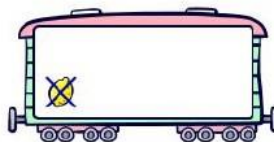
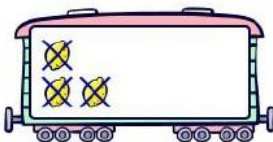
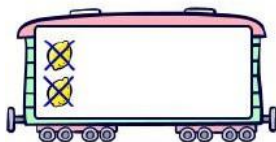
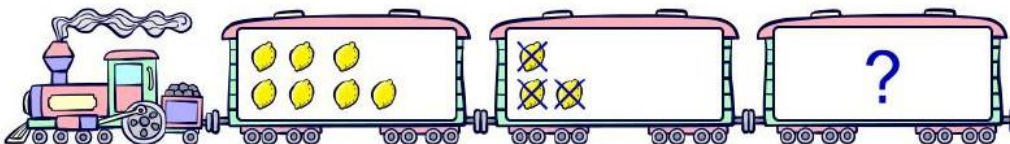


Choose the car that should replace the car with the question mark so that both trains on top are pulling the same number of items.

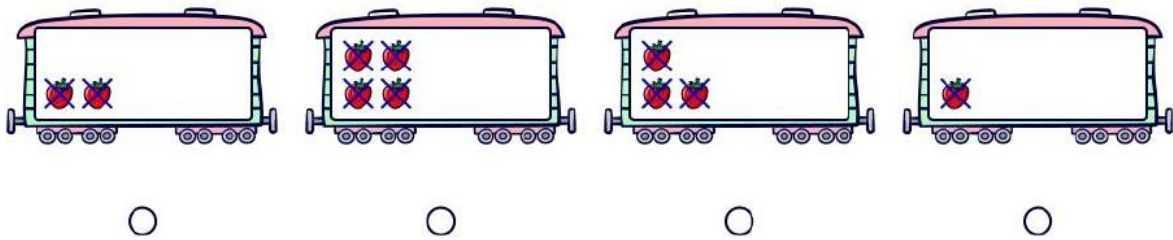
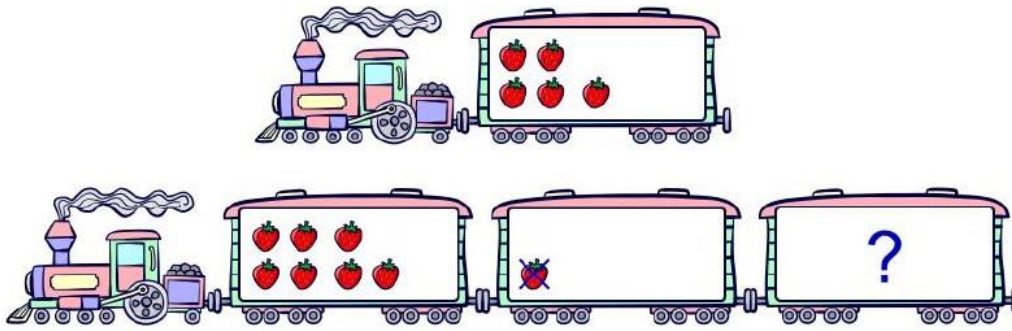
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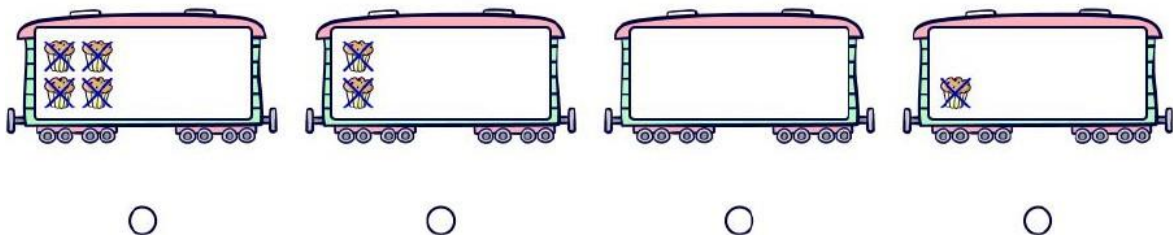
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61.

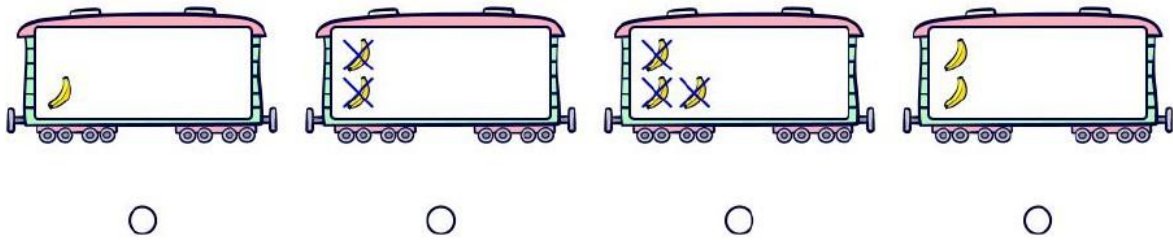
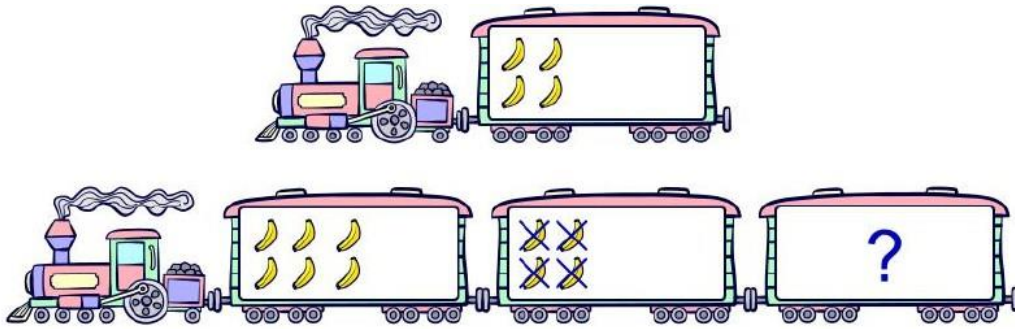


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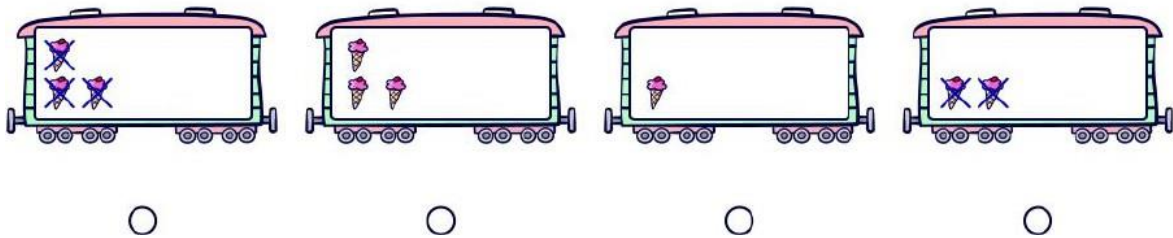
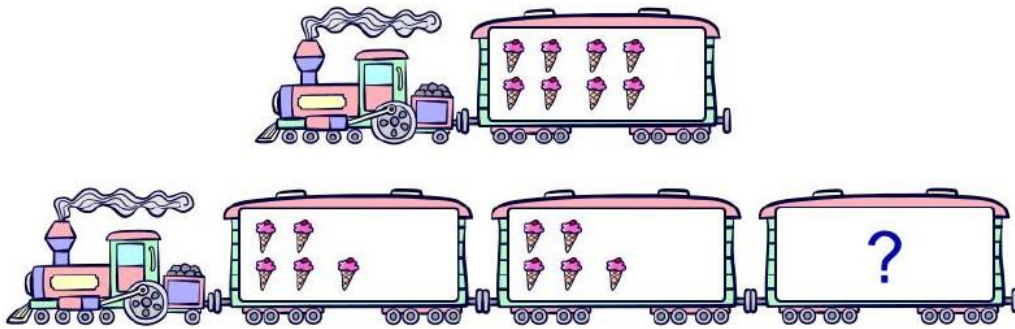




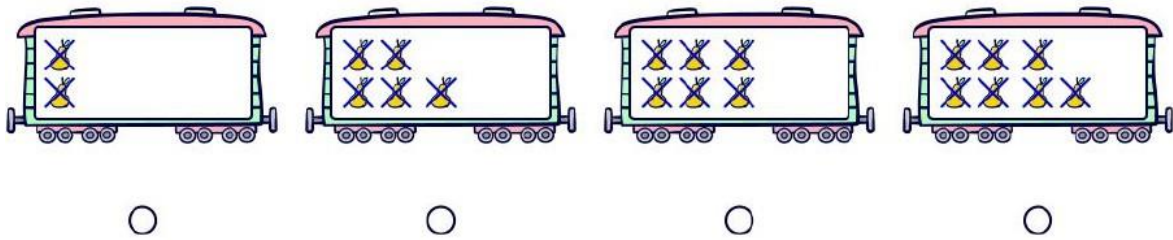
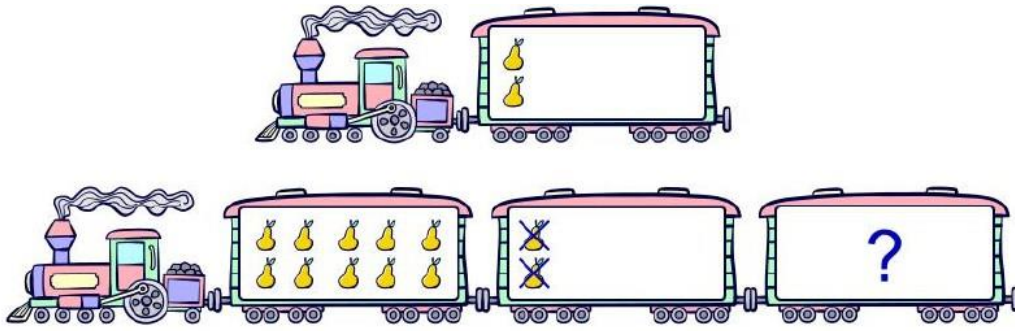
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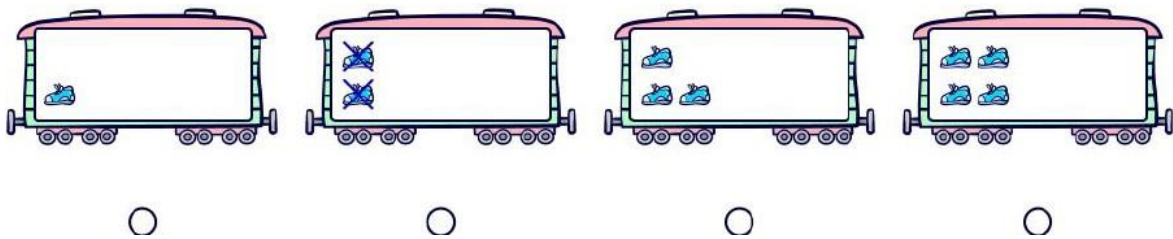
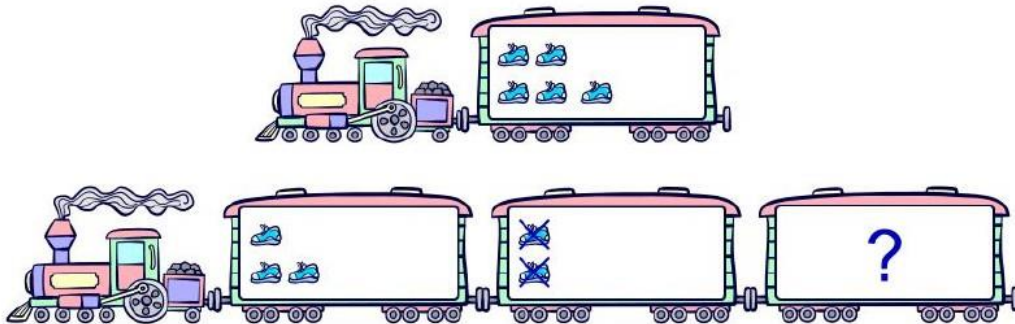
64.



65.



66.



## Answer Key

1. 1<sup>st</sup> picture over the circle –  $1 = 0 + 1$
2. 2<sup>nd</sup> picture –  $4 = 2 + 2$
3. 2<sup>nd</sup> picture –  $4 = 3 + 1$
4. 2<sup>nd</sup> picture –  $5 = 3 + 2$
5. 3<sup>rd</sup> picture –  $3 = 1 + 2$
6. 3<sup>rd</sup> picture –  $6 = 0 + 6$
7. 1<sup>st</sup> picture –  $5 = 1 + 4$
8. 1<sup>st</sup> picture –  $4 + 1 = 5$
9. 2<sup>nd</sup> picture –  $6 = 2 + 4$
10. 1<sup>st</sup> picture –  $2 = 1 + 1$
11. 2<sup>nd</sup> picture –  $3 + 2 = 2 + 3$
12. 2<sup>nd</sup> picture –  $3 + 3 = 6$
13. 1<sup>st</sup> picture –  $4 + 2 = 1 + 5$
14. 1<sup>st</sup> picture –  $3 + 4 = 1 + 6$
15. 3<sup>rd</sup> picture –  $5 + 3 = 2 + 6$
16. 3<sup>rd</sup> picture –  $4 + 5 = 9$
17. 2<sup>nd</sup> picture –  $5 + 0 = 2 + 3$
18. 1<sup>st</sup> picture –  $4 + 1 = 2 + 3$
19. 2<sup>nd</sup> picture –  $5 + 2 = 3 + 4$
20. 2<sup>nd</sup> picture –  $8 = 4 + 2 + 2$
21. 2<sup>nd</sup> picture –  $1 + 6 = 3 + 4$
22. 3<sup>rd</sup> picture –  $2 + 4 + 3 = 3 + 6$
23. 1<sup>st</sup> picture –  $5 + 6 = 11$
24. 1<sup>st</sup> picture –  $4 + 1 + 2 = 1 + 6$
25. 2<sup>nd</sup> picture –  $6 = 3 + 3$
26. 2<sup>nd</sup> picture –  $7 = 2 + 3 + 2$
27. 3<sup>rd</sup> picture –  $4 + 4 = 2 + 2 + 4$
28. 3<sup>rd</sup> picture –  $6 + 7 = 3 + 10$
29. 2<sup>nd</sup> picture –  $2 + 8 = 5 + 5$
30. 2<sup>nd</sup> picture –  $6 + 8 = 9 + 5$
31. 1<sup>st</sup> picture –  $6 + 4 = 0 + 2 + 8$
32. 3<sup>rd</sup> picture –  $6 + 3 = 3 + 3 + 3$
33. 3<sup>rd</sup> picture –  $12 = 0 + 5 + 7$
34. 2<sup>nd</sup> picture –  $3 + 4 + 5 = 5 + 7$
35. 1<sup>st</sup> picture –  $4 + 5 = 2 + 7$
36. 3<sup>rd</sup> picture –  $4 + 3 = 1 + 2 + 4$
37. 2<sup>nd</sup> picture –  $2 + 10 = 3 + 9$
38. 2<sup>nd</sup> picture –  $4 + 4 = 2 + 3 + 3$
39. 1<sup>st</sup> picture –  $9 = 3 + 3 + 3$
40. 1<sup>st</sup> picture –  $11 = 5 + 6$
41. 2<sup>nd</sup> picture –  $4 + 6 = 6 + 2 + 2$
42. 3<sup>rd</sup> picture –  $7 + 9 = 6 + 10$
43. 1<sup>st</sup> picture –  $7 = 5 + 1 + 1$
44. 3<sup>rd</sup> picture –  $3 + 5 + 3 = 11$



45. 3<sup>rd</sup> picture –  $5 + 3 + 4 = 12$   
46. 2<sup>nd</sup> picture –  $9 = 3 + 3 + 3$   
47. 3<sup>rd</sup> picture –  $4 + 5 + 5 = 7 + 7$   
48. 3<sup>rd</sup> picture –  $4 + 3 + 7 = 7 + 7$   
49. 1<sup>st</sup> picture –  $6 = 1 + 0 + 5$   
50. 1<sup>st</sup> picture –  $10 + 8 = 5 + 6 + 7$   
51. 3<sup>rd</sup> picture –  $7 + 3 = 5 + 5$   
52. 2<sup>nd</sup> picture –  $11 + 8 = 6 + 6 + 7$   
53. 2<sup>nd</sup> picture –  $12 = 4 + 4 + 4$   
54. 3<sup>rd</sup> picture –  $4 + 2 + 9 = 5 + 5 + 5$   
55. 1<sup>st</sup> picture –  $7 + 7 = 2 + 3 + 9$   
56. 2<sup>nd</sup> picture –  $5 + 9 = 4 + 6 + 4$   
57. 3<sup>rd</sup> picture –  $10 + 8 = 11 + 7$   
58. 3<sup>rd</sup> picture –  $2 = 7 - 2 - 3$   
59. 3<sup>rd</sup> picture –  $3 = 5 - 2$   
60. 1<sup>st</sup> picture –  $2 = 7 - 3 - 2$   
61. 4<sup>th</sup> picture –  $5 = 7 - 1 - 1$   
62. 3<sup>rd</sup> picture –  $7 = 10 - 3 - 0$   
63. 4<sup>th</sup> picture –  $4 = 6 - 4 + 2$   
64. 4<sup>th</sup> picture –  $8 = 5 + 5 - 2$   
65. 3<sup>rd</sup> picture –  $2 = 10 - 2 - 6$   
66. 4<sup>th</sup> picture –  $5 = 3 - 2 + 4$

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