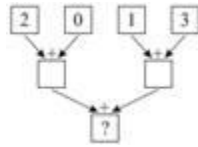


Math Kangaroo 2013 Sample Questions - Levels 5 & 6

1. We put 2, 0, 1, 3 into an adding machine, as shown. What is the result in the box with the question mark?



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

2. Nathalie wanted to build the same cube as Diana had (Figure 1). However, Nathalie ran out of small cubes and built only a part of the cube, as you can see in Figure 2. How many small cubes must be added to Figure 2 to form Figure 1?



Figure 1

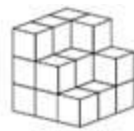
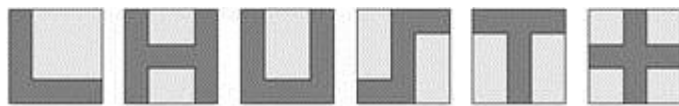


Figure 2

- A) 5 B) 6 C) 7 D) 8 E) 9

12. Mary shades various shapes on square sheets of paper, as shown.



How many of these shapes have the same perimeter as the sheet of paper itself?

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

14. Matthew is catching fish. If he had caught three times as many fish as he actually did, he would have 12 more fish than he does. How many fish did he catch?

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

23. There are four buttons in a row as shown below. Two of them show happy faces, and two of them show sad faces. If we press on a face, its expression turns to the opposite (e.g. a happy face turns into a sad face). In addition to this, the adjacent buttons also change their expressions to the opposite. What is the least number of times you need to press the buttons in order to get all happy faces?



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

24. 40 boys and 28 girls stand in a circle, hand in hand, all facing inwards. Exactly 18 boys give their right hand to a girl. How many boys give their left hand to a girl?

- A) 18 B) 9 C) 28 D) 14 E) 20