

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

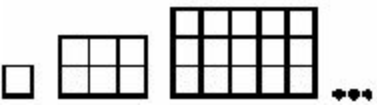
**Problem 1**

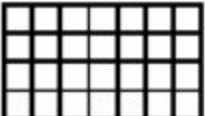
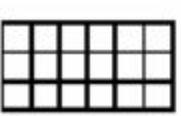
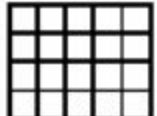


After 1 comes 3, after 3 comes 5, after 5 comes 7. What comes after 7?

1 3 5 7 ...

- A) 2      B) 4      C) 7      D) 8      E) 9

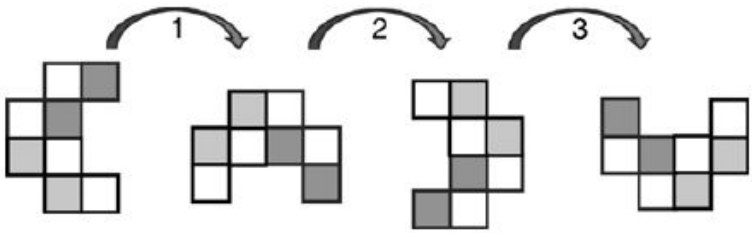
**Problem 2**

Which figure is next in this sequence: 

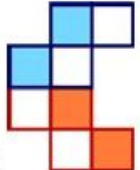
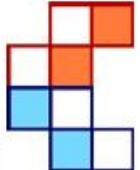
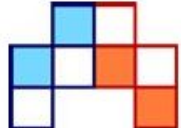
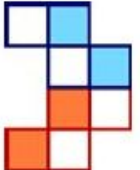
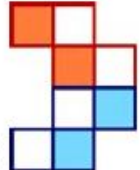
- A)  B)  C)  D)  E) 

**Problem 3**

Alfred turns his building block 10 times. The first three times can be seen in the picture.

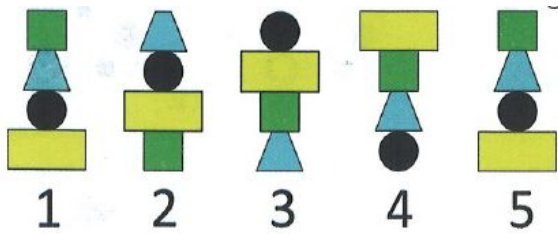


What is the final position of the building block?

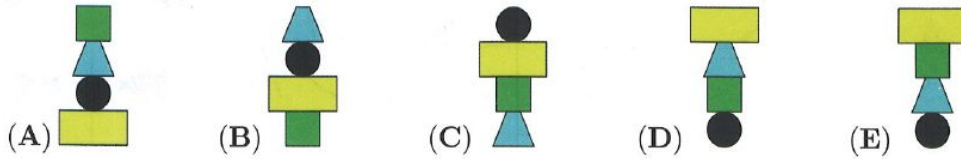
- (A)  (B)  (C)  (D)  (E) 

### Problem 4

Emilie builds towers in the following pattern:

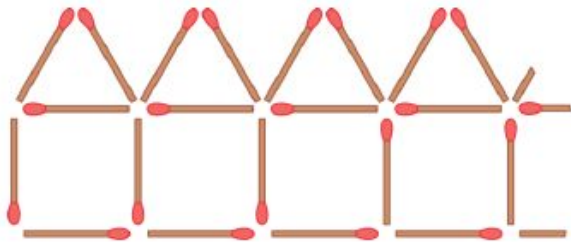


What will the 16th tower look like?



### Problem 5

Sophie makes a row of 10 houses with matchsticks. In the picture you can see the beginning of the row. How many matchsticks does Sophie need altogether?



- (A) 50      (B) 51      (C) 55      (D) 60      (E) 62

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**Problem 1**

Luke repeats the same four stickers on a strip.

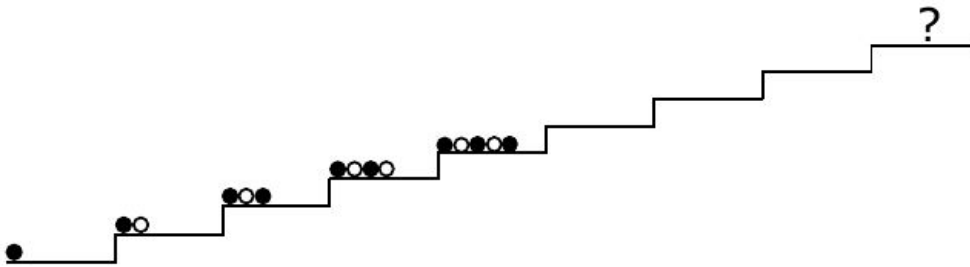


Which is the tenth sticker put by Luke?

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

**Problem 2**

Sophie is arranging black and white marbles following the pattern shown in the picture.



How will the marbles appear on the top level where the question mark located?

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

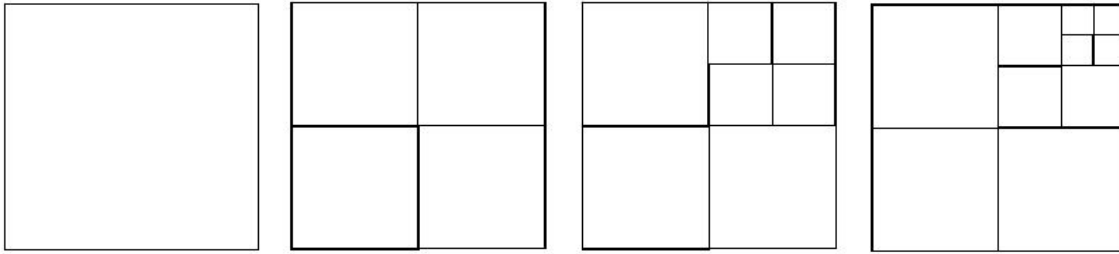
**Problem 3**

Zosia is drawing kangaroos. The first one is blue, the next one green, followed by red, and finally yellow, and then again blue, green, red, yellow, and so on, in the same order. What color will the seventeenth kangaroo be?

- A) Blue
- B) Green
- C) Red
- D) Black
- E) Yellow

**Problem 4**

We make a sequence of figures with tiles. The first four figures have 1, 4, 7 and 10 tiles, respectively.

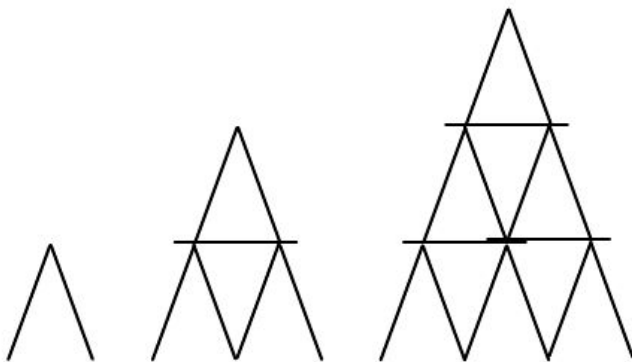


How many tiles will the fifth figure have?

- A) 11      B) 12      C) 13      D) 14      E) 15

**Problem 5**

Johnny builds a house made out of cards. In the picture, one-floor, two-floor, and three-floor such houses are shown. How many cards does Johnny need to build 4-floor house?



- A) 23      B) 24      C) 25      D) 26      E) 27

Problem Set

**Problem 1 (1-2\_2006\_8)**

**Problem 2 (1-2\_2005\_16)**

**Problem 3 (1-2\_2017\_7)**

**Problem 4 (1-2\_2018\_7)**

**Problem 5 (1-2\_2013\_16)**

Homework

**Problem 1 (1-2\_2012\_5)**

**Problem 2 (1-2\_2016\_9)**

**Problem 3 (3-4\_2003\_4)**

**Problem 4 (3-4\_2008\_3)**

**Problem 5 (3-4\_2006\_18)**