

ASIA SANSU OLYMPICS 2023

SENIOR

[Question 5]

Yoshiko is playing with matches having the same size. She makes squares whose side is one match and arranges them. If she arranges all the matches as shown in Figure 1, then she can make 28 squares.

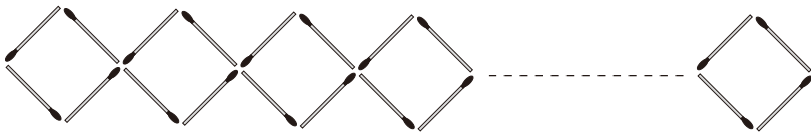


Figure 1

(1) If Yoshiko arranges all the matches as shown in Figure 2, how many squares can she make?

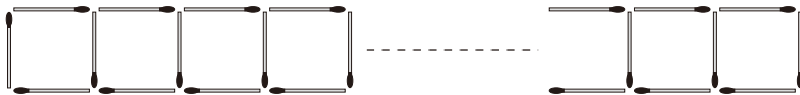


Figure 2

(2) If Yoshiko arranges all the matches as shown in Figure 3, how many squares can she make?

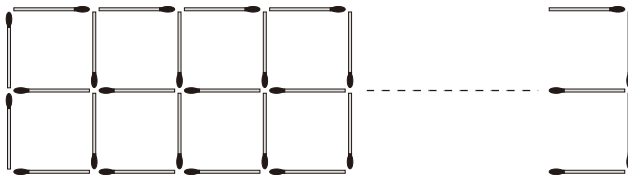


Figure 3

(3) What is the maximum number of squares she can make?