

## SPATIAL SENSE AND GEOMETRY

## Apply Principles of Congruence, Similarity, and Transformations

Score: \_\_\_\_\_

**Erminio's Response:**

22 toothpicks in figure 10, add 2 every time, 5 square units, 1 square unit; yes because

$20 \times 2 = 42$  and you add 2 to that, because you add 2 more every time.



Comments: \_\_\_\_\_

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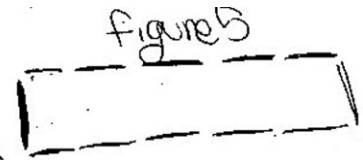
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Score: \_\_\_\_\_

**Andre's Response:**

Figure 10 uses 22 toothpicks; the  $N$ th figure will have  $n$  toothpicks on the top and bottom and two more on the sides; Figure 5 has an area of 5 square units so the  $N$ th figure has the same number of square units as its figure

number. It is not reasonable for the 20th figure to contain 42 toothpicks and have an area of 22 square. The toothpicks are reasonable but the area should always be the same as the figure number



Comments: \_\_\_\_\_

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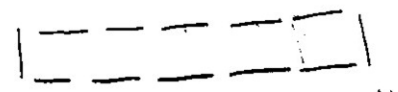
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Score: \_\_\_\_\_

**Ianaxi's Response:**

There will be 22 toothpicks to make figure 10. It takes 2 for the  $N$ th figure because each square goes up by 2 starting with 4. The area for figure 5 is 5 square units.

The area goes up by ones starting with one. No its not reasonable for the 20th figure to contain 42 toothpicks and 22 square units.



Comments: \_\_\_\_\_

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Score: \_\_\_\_\_

**Kyoung Hee's Response:**

22 toothpicks in figure 10; In Figure 9 there are 20 toothpicks; 5 square units in figure 5; In the 1000th figure there are 1000 square units. It is reasonable because there should be half of the number of toothpicks plus 2.



Comments: \_\_\_\_\_

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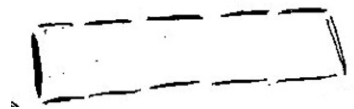
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Score: \_\_\_\_\_

**Ching's Response:**

It would take 12 toothpicks to make figure 10; 16 cause every figure you add two more and the 7th figure would have 16; 5 square units because you can make 5 squares out of it; 7 square units, you can make 7 squares; no because it would be 20 square units not 22.



Comments: \_\_\_\_\_

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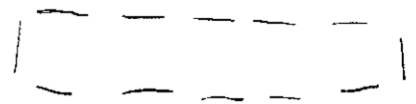
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Score: \_\_\_\_\_

**Felton's Response:**

22 toothpicks in figure 10, 20 toothpicks for figure n. Are of figure 5 is 20, Are of figure n is 22. Not enough information.



Comments: \_\_\_\_\_

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