

2007 BCCTM Annual Mathematics Contest—Grade 4
Team Questions

Question #1

In a sequence of starts and stops, an elevator travels from the first floor to the fifth floor and then to the second floor. From there, the elevator travels to the fourth floor and then to the third floor. If the floors are 3 meters apart, how far has the elevator traveled?

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Question #2

Shari had a bag of marbles. She gave one-third of them to Sarah, and then one-fourth of the remaining marbles to Eddie. Shari then had 24 marbles left in the bag. How many marbles were in the bag to start with?

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Question #2

Shari had a bag of marbles. She gave one-third of them to Sarah, and then one-fourth of the remaining marbles to Eddie. Shari then had 24 marbles left in the bag. How many marbles were in the bag to start with?

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Question #3

The three figures below are divided into small congruent triangles.



Figure 1

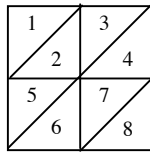


Figure 2

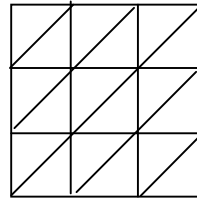


Figure 3

Complete the table below. First, fill in how many small triangles make up Figure 3. Then find the number of small triangles that would be needed for the 4th figure if the sequence of figures is extended.

Figure	Number of Small Triangles
1	2
2	8
3	
4	

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Question #3

The three figures below are divided into small congruent triangles.



Figure 1

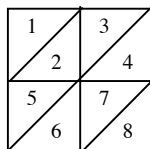


Figure 2

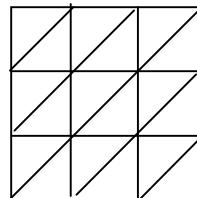


Figure 3

Complete the table below. First, fill in how many small triangles make up Figure 3. Then find the number of small triangles that would be needed for the 4th figure if the sequence of figures is extended.

Figure	Number of Small Triangles
1	2
2	8
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Question #4

The numbers in the sequence 7, 11, 15, 19, 23, . . . increase by four. The numbers in the sequence 1, 10, 19, 28, 37, . . . increase by nine. The number 19 is in both sequences. If the two sequences are continued, what is the next number that is in BOTH the first and the second sequences?

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Question #5

Toothpicks are arranged as shown in the figures.

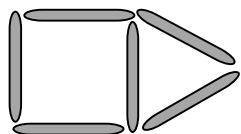


Figure 1

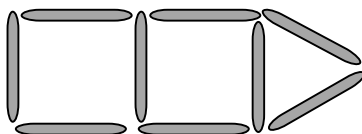


Figure 2

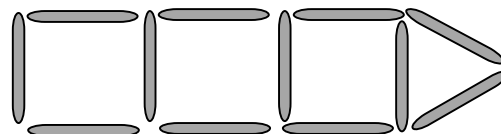


Figure 3

If the pattern is continued, how many toothpicks would be used to make Figure 10?

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Question #5

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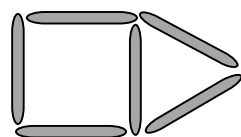


Figure 1

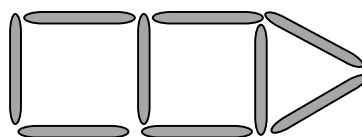


Figure 2

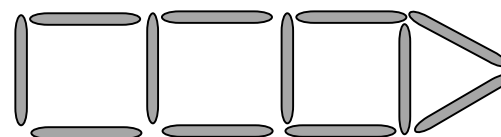


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If the pattern is continued, how many toothpicks would be used to make Figure 10?

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Question #6

Stacy has a piece of yarn that is 40 inches long. She wants to cut the yarn into pieces. Each piece will be $\frac{2}{3}$ of an inch. How many pieces will she have?

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Question #6

Stacy has a piece of yarn that is 40 inches long. She wants to cut the yarn into pieces. Each piece will be $\frac{2}{3}$ of an inch. How many pieces will she have?

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Question #7

Samuel took a bus from Fort Lauderdale to Delray Beach, which is a distance of 54 miles. The bus took 45 minutes for the trip. What was the average speed of the bus expressed in miles per hour?

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Question #7

Samuel took a bus from Fort Lauderdale to Delray Beach, which is a distance of 54 miles. The bus took 45 minutes for the trip. What was the average speed of the bus expressed in miles per hour?

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Question #8

Caribbean Airlines requires each suitcase to weigh 31.75 kilograms or less before it can go onto the airplane. Sandy's suitcase weighs 3,620 grams before it is packed. What is the maximum amount of weight, in kilograms, Sandy can pack in her suitcase and still be allowed to bring her suitcase onto the airplane?

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