



**THIRD SPACE  
LEARNING**

# Shape Patterns

Algebra

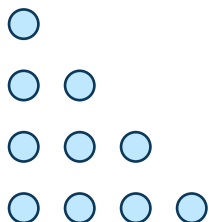
**Grades 4 to 5**

## Skill Questions

Name: .....

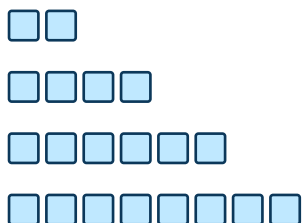
Date: .....

- 1 How many circles will be in the next row?



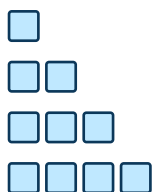
Answer

- 2 How many squares will be in the 9th row?



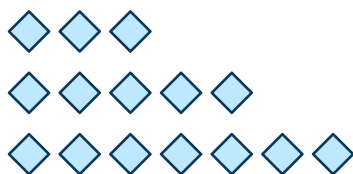
Answer

- 3 In the pattern below, each row adds one more square to the previous row. Determine the number of squares in the 5th row.



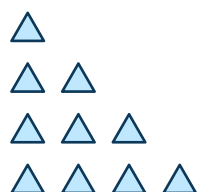
Answer

- 4 How many diamonds will be in the next row?



Answer

- 5 How many triangles will be in the 7th row?



Answer

## Shape Patterns | Grades 4 to 5

6 How many squares will be in the 13th row?



Answer

7 Determine the number of diamonds in the 8th row.



Answer

8 Calculate the total number of squares in the first 10 rows.



Answer

9 How many triangles are in the first 5 rows?



Answer

10 How many squares are in the first 8 rows?



Answer

## Applied Questions

- 11** A teacher is arranging students in a pattern for a class photo. The first row has one student, the second row has two students, and the pattern continues. If there are 10 rows in total, how many students are in the class?

Answer

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- 12** Maria is creating a design using square tiles. She starts with one tile in the first row and adds one more tile to each subsequent row. If she has 15 rows in total, how many tiles does she need in total?

Answer

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- 13** A farmer is planting trees in a triangular pattern in her orchard. The first row has one tree, the second row has two trees, and so on. If she plants 8 rows of trees, how many trees will she have planted in total?

Answer

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- 14** Tim is arranging dominoes in a pattern. The first row has one domino, the second row has two dominoes, and the pattern continues. If he has 12 rows in total, how many dominoes does he need?

Answer

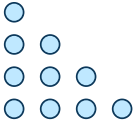
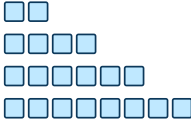
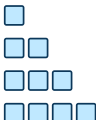
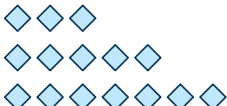
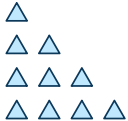
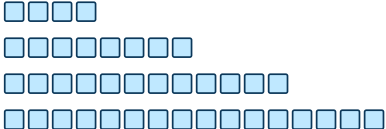
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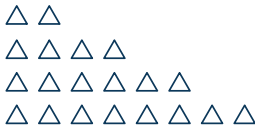
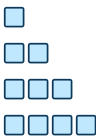
- 15** A school is organizing chairs for a performance. In the first row, there is one chair, in the second row, there are two chairs, and so on. If they have 7 rows of chairs, how many chairs will they need in total?

Answer

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## Answers

Question number	Question	Answers	Standard
1	How many circles will be in the next row? 	5 circles	4.OA.C.5
2	How many squares will be in the 9th row? 	18 squares	4.OA.C.5
3	In the pattern below, each row adds one more square to the previous row. Determine the number of squares in the 5th row. 	5 squares	4.OA.C.5
4	How many diamonds will be in the next row? 	9 diamonds	4.OA.C.5
5	How many triangles will be in the 7th row? 	7 triangles	4.OA.C.5
6	How many squares will be in the 13th row? 	52 squares	4.OA.C.5

Question number	Question	Answers	Standard
7	<p>Determine the number of diamonds in the 8th row.</p> 	8 diamonds	4.OA.C.5
8	<p>Calculate the total number of squares in the first 10 rows.</p> 	55 squares	4.OA.C.5
9	<p>How many triangles are in the first 5 rows?</p> 	30 triangles	4.OA.C.5
10	<p>How many squares are in the first 8 rows?</p> 	36 squares	4.OA.C.5
11	<p>A teacher is arranging students in a pattern for a class photo. The first row has one student, the second row has two students, and the pattern continues. If there are 10 rows in total, how many students are in the class?</p>	There will be 55 students in the class.	4.OA.C.5
12	<p>Maria is creating a design using square tiles. She starts with one tile in the first row and adds one more tile to each subsequent row. If she has 15 rows in total, how many tiles</p>	Maria will need 120 tiles in total.	4.OA.C.5

## Shape Patterns | Grades 4 to 5 | Answers




Question number	Question	Answers	Standard
13	A farmer is planting trees in a triangular pattern in her orchard. The first row has one tree, the second row has two trees, and so on. If she plants 8 rows of trees, how many trees will she have planted in total?	The farmer will have planted 36 trees in total.	4.OA.C.5
14	Tim is arranging dominoes in a pattern. The first row has one domino, the second row has two dominoes, and the pattern continues. If he has 12 rows in total, how many dominoes does he need?	Tim will need 78 dominoes.	4.OA.C.5
15	A school is organizing chairs for a performance. In the first row, there is one chair, in the second row, there are two chairs, and so on. If they have 7 rows of chairs, how many chairs will they need in total?	The school will need 28 chairs in total	4.OA.C.5

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