

## Unit CMA150 – Triangular Pattern

## Triangular Pattern, released item #1 (CMA150Q01)

PISA 2022

**Triangular Pattern**  
Question 1 / 3

Refer to "Triangular Pattern" on the right. Click on a choice to answer the question.

What percentage of the triangles in the first four rows of Alex's pattern are blue?

37.5%  
 50.0%  
 60.0%  
 62.5%

**TRIANGULAR PATTERN**

Alex drew the following pattern of red and blue triangles.

The first four rows of the pattern are shown below.

This is the first item in the unit *Triangular Pattern* and there is no introduction screen. For this unit, students are presented with a series of items related to a drawing a person has made of rows using alternating red and blue triangles. The stimulus shows the first four rows of the pattern, and this same image is repeated in the stimulus of all three items in the unit.

For the first item, students are asked to compute the percentage of blue triangles shown in the first four rows of the pattern. There are six blue triangles and 16 total triangles, so the percentage of blue triangles is 37.5% ( $6 \div 16 = 0.375$ ). This is an easy item (Level 1a) and is intended to get students thinking about the pattern by employing a simple algorithm with all information shown.

Unit Name – Item #	Triangular Pattern – CMA150Q01
Content Area	Quantity
Process	Employ
Context	Scientific
Item Format	Simple Multiple Choice - Computer Scored
Answer	37.5%
Proficiency Level	1a