

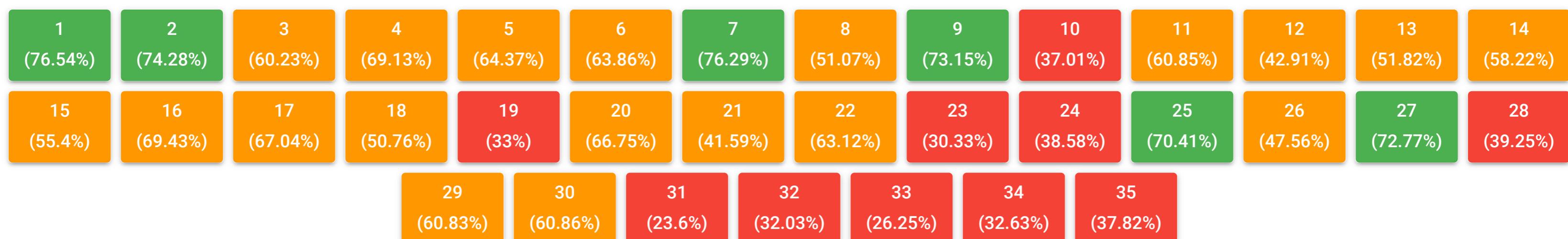


Detail

2025 Y5 T4W6 Mathematical Reasoning Test



Review

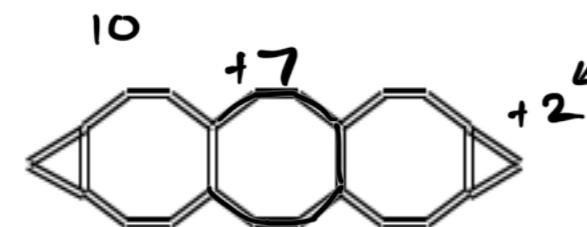


Question 34

A pattern begins and ends with a triangle. In between the two triangles are octagonal shapes.

An example of the pattern with three octagonal shapes is shown below.

This pattern uses 26 sticks.



If I wanted to make a similar pattern with 25 octagonal shapes, how many sticks would I need?

$$\begin{aligned} S_{\text{start}} &= 12 \\ \text{every additional oct.} &\rightarrow +7 \\ 12 + 24 \times 7 & \\ 168 + 12 &= 180 \end{aligned}$$

 180

 188

 194

 200

 225

Correct answer:

180

Hint:

2 ends = 4 sticks

1 octagon = 8 sticks

Each additional octagon: (+ 7 sticks)

$$8 + (24 \times 7) + 4 = 180$$