

Piece It Together

Level C

You work for a sporting goods manufacturer and you are finding that soccer is becoming more and more popular.

The top-selling soccer ball is made by **Everkick**. The design pattern of this ball is composed of pentagons and hexagons. Below are three views of the **Everkick** soccer ball. Analyze the design pattern and determine the number of pentagons and hexagons it takes to make a ball. Explain your conclusion using mathematical reasoning.



The **GoalScorer** ball is second on the list of best-selling soccer balls. It has a different design pattern. The design pattern of this ball is composed of pentagons, triangles, and squares. Below are three views of the **GoalScorer** soccer ball. Analyze the design pattern and determine the number of pentagons, triangles, and squares it takes to make a ball. Explain your conclusion using mathematical reasoning.



