

Complete the cycle by filling in the answers. Each question uses the answer to the previous question in the loop. All answers are **positive integers**.

You also need to craft a poster showing your thought processes throughout.

Team name: _____

Let d be the previous answer.
Sam buys 2 pizzas from HexaPizza. Each pizza is a regular hexagon cut into 6 equilateral triangle slices with side lengths d . After eating 2 slices, the area of the remaining pizzas can be expressed as $a\sqrt{3}$, where a is an integer. Find a .

a

Let c be the previous answer.
George cycles around a circular track of radius 20 m. He cycles at a constant speed of $c \text{ m s}^{-1}$. Determine the number of complete laps he would finish after cycling for 60 seconds. (take $\pi=3.14$)

d

Let a be the previous answer.
A cinema runs shows every 50 minutes starting from 9:00 am. Seb arrives at the cinema at 12: a pm. Find, in minutes, the amount of time that Seb has to wait before the next show.

b

Let b be the previous answer.
Find the sum of the distinct prime factors of b that are less than $\sqrt{b}$.

c