Summary of what we have seen:

1. The construction of a kite and dart tiling satisfying matching conditions.

2. The ratio of kites to darts tends to the golden ratio $\frac{1+\sqrt{5}}{2}$ as the size of the patch tends to infinity.

3. Since this number is irrational, the tiling is aperiodic.

In fact:

Every tiling with kites and darts (satisfying the matching conditions) is aperiodic.

Open problem: Is there a single tile shape with this property that it tiles the plane and every such tiling is aperiodic ?

And finally: what about colourings?

The Four Colour Theorem says that any map in the plane can be coloured with 4 colours.

Any kite and dart tiling can be coloured with 3 colours.