

## **Arom Story Quest Ch. 6 – Squeezing Water from a Stone**

You and Dantago wake up the next morning. He looks very refreshed and is ready to return home to share the news of the scroll. So, you both pack up everything, he quickly prays to the goddess Hiox for safety and the strength to help his people through the drought, and then you're off.

\* \* \*

You reach the bridge when you see !Nari flying high in the sky. Dantago waves to the bird and tells you that there will be a great feast at The Braai tonight! !Nari returns to Mai!get who immediately gathers everyone together to start cooking...

\* \* \*

It is almost evening when you and the chief arrive in The Braai. You can smell all the delicious foods they have spent all day preparing for your arrival. They have all kinds of seafood, a few vegetables (that they grow in the other oases), some dates and figs for dessert, etc. You thank them wholeheartedly for the food and they say, "No! It is the least we could do for you... You brought back our chief. You saved Dantago! Thank you!" You blush and then yawn. They see how tired you are and make a nice bed for you. You pass out within seconds...

\* \* \*

When you awaken, the village is humming with activity. The chief has summoned everyone to look at the scroll he found in the shrine. He tells everybody:

"My good people, we have suffered many years through this drought, but we have held on because of the vast amounts of freshwater that exist in our precious oases. However, the waters in our small slices of paradise are beginning to recede. In fact, some of them have nearly dried up completely. It is because of this that I went to the Mountain Shrine. Many of you thought I went merely to pray, but in fact, legend told of a scroll that would give the secret to surviving this drought. I went there to retrieve it. And, here it is!"

He holds up the scroll and everyone begins to cheer. Slowly, he unravels it and starts to read...

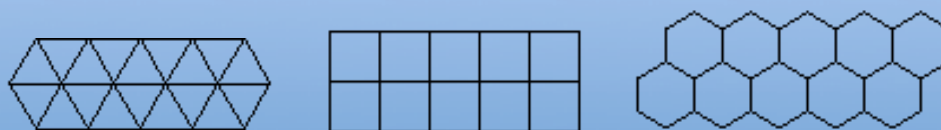
TESSELLATION IS VITAL FOR CAPTURING THE MORNING FOG.

Dantago is shocked. "That's it? Surely, there must be more!" He completely unravels it, flips it over, but can find nothing else written there. He looks out over his people and feels like a complete failure. "Does anybody understand what this means?" he asks. The crowd is completely quiet. But then, that small, weird lady hops through the crowd and says, excitedly...

"You see, **tessellation** is repeating a shape over and over to cover a surface (or plane) without gaps or overlap. It can also be called "tiling." When you tile a floor, you need to use shapes to cover that floor, but you need to not leave holes (gaps) or have any overlapping (otherwise you'll trip and fall).

Chain-link fences are also normally tessellated. In fact, many of the fences use a diamond kind of pattern. In the same way, nets (primarily used for fishing) are designed using tessellation.

To explain, let me show you some tessellations by drawing in the sand here:



The first group is a tessellation of equilateral triangles. The second is a tessellation of squares. And, the last is a tessellation of hexagons.

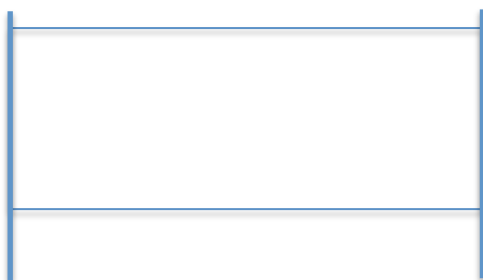
It sounds like the ancient Nomba people used to make large nets using tessellation. Each morning, the fog (or mist) coming from the ocean would form condensation on the nets, which would drip into tubes at the base of the net and then pool into buckets or even down trenches into the oases. This must be how they collected water during times of extreme drought!"

Everyone looked at her, stunned. She had gone from making no-sense at all, to single-handedly solving this incredible riddle that would save the Nomba from certain death by dehydration.

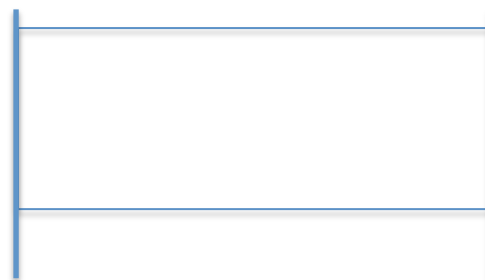
"Let's start building these giant nets!" exclaimed Dantago. Everyone cheered and rushed to help. "Get the leaves and vines!" "Cut down a couple trees for the poles." "Start weaving those nets..."

**Task:** Help the Nomba weave the nets by drawing tessellations on the four nets you find below. You must use the following shapes on the correct net: Right Triangles for Net A, Squares for Net B, Rectangles for Net C, and Rhombi (or Diamonds) for Net D.

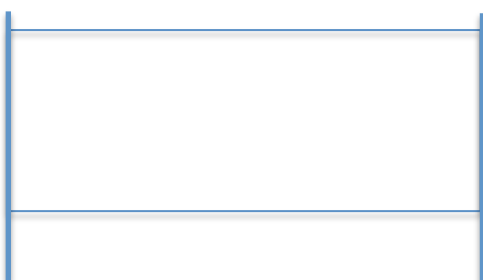
A



B



C



D

