

Small World, Isn't It?

Introduction

Part one: Kevin

Durango is preparing to host this celebration for July 4th, they want to make it better than last year and that means hosting a better concert (this precedes a fireworks show). What Kevin is wanting to do is create a system of platforms that can enable the baton tossers (they are pulling everything they can out for this one). One of the constraints that they have for the layout of the platforms is that they must be an equal difference in height from one another. There also needs to be a set amount of platforms based on the amount of people performing at the show. Finally, he needs to decide on the height of the first platform. These would be the defining constraints that govern the set up of the platforms but first he has to figure out what he will be doing.

Part two: Camellia

Camellia is reliant on what Kevin decides to do with the amount of people, platforms, and height of said platforms. Once she has that number she will be able to cut a colorful stripe of material that will go from the top of the platform to the bottom and will span the entire width of the platform. She also needs the height of the tallest platform to get a permit from the city.

Part three: End Goal

The end goal is to find solutions that will decide the total number of platforms and the length of fabric needed to cover the platform's sides. Equations will also have to be made and that involves figuring out the height of the first platform, the height of the tallest platform, and the difference in height between the platforms.

Process and justification

We begin by listing the variables of the problem, what we know is that we are going to have a difference in height and that difference is important to our final objective but we know this difference in height which will be classified as variable D must be the same. We also know that there will be a total number of platforms so we will call the number of platforms N . The new height comes from the original height of the platform + the difference in height will be H , so H will always be the tallest option that we have.

Variables

D - difference in height between the platforms

N - the number of platforms

H - the new height of the platform

Now we will continue with the solution of the problem, the open form of the problem resembles something like this

$(H) + (H+D) + (H+2D) + (H+3D)$ and this will keep going for a while until we reach $(H+(N-2)D) + (H+(N-1)D)$ which can be looked at as the tallest platforms. But what can we do with it in open form? Well we can do a very long winded addition problem with multiple variables or we can condense it into a closed equation.

We can first get this from the "Total", the total is what that first equation is equal to so it would be
 $T = (H) + (H+D) + (H+2D) + (H+3D) \dots (H+(N-2)D) + (H+(N-1)D)$

We would then add this with a reverse form of itself to get 2T doubling the total
 $(H+(N-1)D) + (H+(N-2)D) + (H+(N-3)D) \dots (H+3D) + (H+2D) + (H+D) + (H)$

When we total the numbers they all come out to be
 $N[2h+(n-1)] \dots$

To make the closed equation we add

$$\frac{N[2h+(n-1)] + N[2h+(n-1)]}{2}$$

We divide the product by 2 to account for doubling it earlier.
After that though I just don't know.

Extension question

What if one of the side panels where the fabric would be located and the angle increases as more platforms are added, something along the lines of a 25 degree angle the 3 degrees are added for every one new platform to add something like a horizontal slope. So you would have to account for a lot of different lengths of fabric that are not just based on the height of the platform.

Reflection

I don't know how to continue the equation, is this a reflection or an admission of failure at this point because I can not think of anything to reflect on in particular besides that so yes it is my signed confession of failure. I don't know why I couldn't understand it. I asked questions, wrote notes, discussed with you about the problem but at the end of the day it ended awful. You ever experience something that you do not understand, hell I bet you have that's life I imagine and that is what I experienced here. Something I do not like is all the I statements that are being thrown out, is this a pity party where I listen to Daisuke Tobar (which some have described as Japan's Jandek but I simply cannot see the comparison because a lot of Jandek's music involve these disjointed guitar riffs and unorthodox chord progressions, while Tobar has a gentle melody that is obviously low budget which gives it a rugged sometimes decaying sound. I would say he is more of a folk singer.) it probably is a pity party where I **Reflect** on mistakes and past transgressions with the field of math. I can beat myself up all day about this by saying my problems with things like the open ended nature that acts like a facade because it truly isn't open ended. I can't just say what the height is and there is a way to approach it properly and mathematically. It doesn't make sense to me but makes sense to other people, the same way I can make sense of Infinite jest but to others it's a boring old scroll.

It is not to say that the others are wrong and could never learn the intricacies of perfectly placed words and descriptions in a postmodern society but that everyone is good at something else. Obviously. I will probably ask around more next time asking the people we know are good

at math. At this point I am so burned out with work, LINK, and college that I am going to call it quits. Godspeed you.