



GoldieBlox.



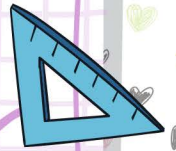
# INTERNATIONAL DAY OF THE GIRL



Never give up with

## Neha Murad

### Biomathematician



MATH MODEL OF TRANSPLANTED KIDNEY

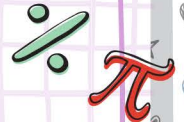
$$\frac{dH_S}{dt} = -\chi_{(E_V E_K)} B_{H_S} E_K - \chi_{(M_V V)} B_{H_S} V$$
$$+ \chi_{(E_V E_K)} B_{H_S} V - S_{H_S} H_I - \chi_{(E_V E_K)} S_{E_H} E_V H_I$$

Once **Neha Murad** decided she loved math, she didn't want to stop. But the journey to getting a PhD, which is an advanced degree that requires a lot of schooling, wasn't always easy. She didn't have any female mentors to look up to. There were barely any other women in her college math classes. And her family wasn't always supportive of her ambitious goals. But Neha did it anyway!

Now she loves encouraging young girls to pursue mathematics, and telling them about all the cool things you can do with it. As a biomathematician, Neha uses math to better understand how the human body works, how it fights diseases, and how it ages. Every day at work, the connections between math and the human body blow her mind. But, then again, Neha always knew math was cool!

### QUESTION

Was there a time you felt like giving up?



### ANSWER

"I loved math up until college. I failed one of my semester exams early on and had to retake the course. As someone who had always excelled in math, this was very hard. But it took a lot of reevaluation of myself to realize that I did not have to love all kinds of math, I just needed to find a niche that I liked and stick to it."



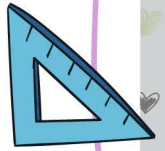
**You do not have to be the 'best' in class to want to pursue a particular STEM field. I was not! You just have to do your best and stick to it even on days when things seem hard.**

- Neha Murad





# Crack The Code



Solve the math problems below. Each one is tied to a letter. The solution to each letter's math problem will help you complete the decoder. Then use the completed decoder to reveal the answer to the math joke at the end!

123

A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

A.  $\begin{array}{r} 3 \\ \times 1 \\ \hline \end{array}$     B.  $\begin{array}{r} 20 \\ - 1 \\ \hline \end{array}$     C.  $\begin{array}{r} 13 \\ \times 2 \\ \hline \end{array}$     D.  $\begin{array}{r} 15 \\ - 8 \\ \hline \end{array}$     E.  $\begin{array}{r} 9 \\ + 14 \\ \hline \end{array}$     F.  $\begin{array}{r} 5 \\ + 4 \\ \hline \end{array}$     G.  $\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$     H.  $\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$     I.  $\begin{array}{r} 12 \\ + 6 \\ \hline \end{array}$

J.  $\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$     K.  $\begin{array}{r} 13 \\ - 2 \\ \hline \end{array}$     L.  $\begin{array}{r} 10 \\ - 8 \\ \hline \end{array}$     M.  $\begin{array}{r} 20 \\ - 3 \\ \hline \end{array}$     N.  $\begin{array}{r} 10 \\ + 3 \\ \hline \end{array}$     O.  $\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$     P.  $\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$     Q.  $\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$     R.  $\begin{array}{r} 30 \\ - 5 \\ \hline \end{array}$

S.  $\begin{array}{r} 12 \\ \div 3 \\ \hline \end{array}$     T.  $\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$     U.  $\begin{array}{r} 26 \\ - 25 \\ \hline \end{array}$     V.  $\begin{array}{r} 16 \\ - 2 \\ \hline \end{array}$     W.  $\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$     X.  $\begin{array}{r} 15 \\ \div 3 \\ \hline \end{array}$     Y.  $\begin{array}{r} 24 \\ - 2 \\ \hline \end{array}$     Z.  $\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$

## Jokes

What's a math teacher's favorite kind of tree?

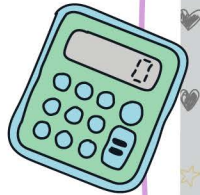
21    23    6    17    23    15    25    22

What's a swimmer's favorite kind of math?

7    18    14    23           18    4    18    6    13

What is a bird's favorite kind of math?

6    12    2           21    23    19    25    3



## ANSWERS

Jokes:  
 1. Geometry  
 2. Division  
 3. Owl-gebra

Math Problems:  
 A: 3; B: 19; C: 26; D: 7; E: 23; F: 9;  
 G: 21; H: 16; I: 18; J: 20; K: 11; L: 2;  
 M: 17; N: 13; O: 6; P: 24; Q: 10; R:  
 25; S: 4; T: 15; U: 1; V: 14; W: 12;  
 X: 5; Y: 22; Z: 8

LEARN MORE!

What's the Point of Math? by DK, DK Children, 2020  
 The Everything Kids' Math Puzzles Book by Meg Clemens, DK Children, 2017  
 Perfectly Logical! by Jenn Larson, Zephyros Press, 2019