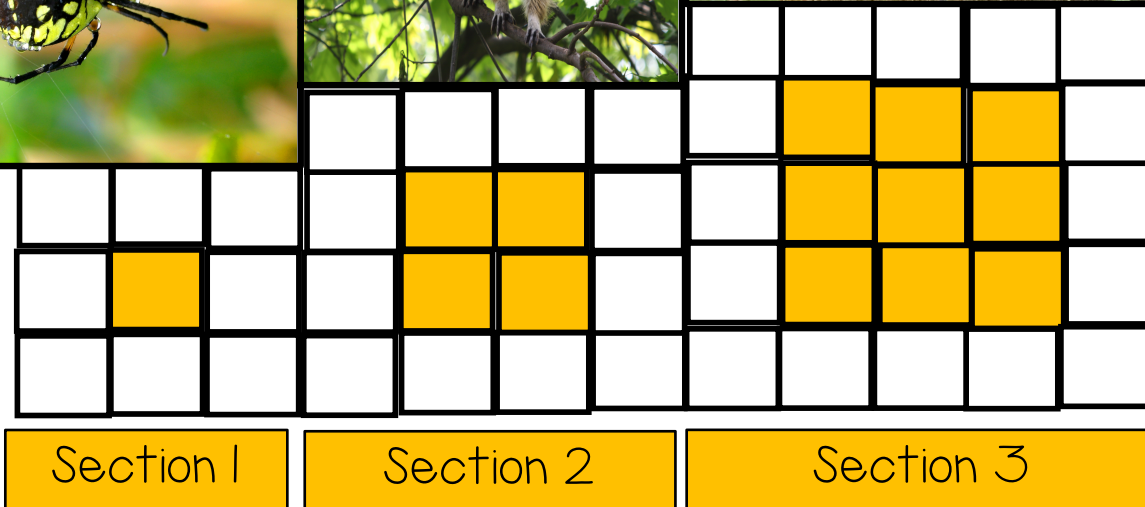


THE GREAT WALL

CHALLENGE 8

- ❑ Students use GROWTH PATTERNS to CREATE FORMULAS and SOLVE FOR VARIABLES!
- ❑ Includes a Video Tutorial for Each Problem!



THE GREAT WALL

HOW TO USE THIS BOOK

Teachers

- Upload this PDF into your Google Classroom.

Students

- Complete each problem.
- Correct your own work, while watching the video tutorials.
- After correcting your work, take your paper to your teacher for a final check.

THE GREAT WALL

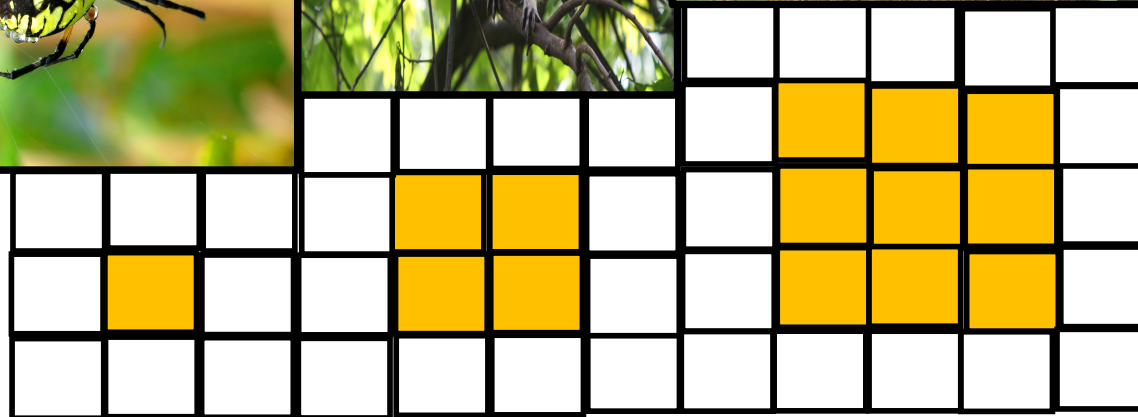
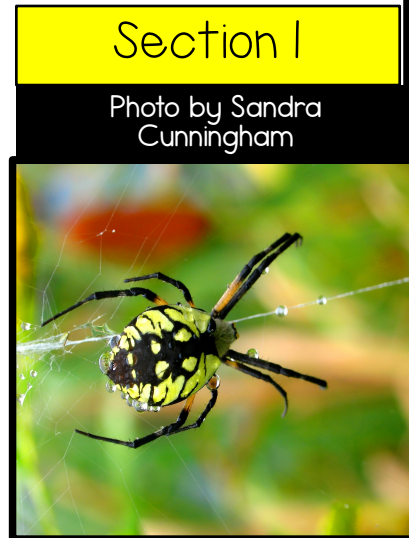
CHALLENGE 8

Silvia the Silk Weaving Spider, Renly the Robbing Raccoon, and Thor the Thirsty Rhino are headed toward your school!

Silvia the Silk Weaving Spider is about to wrap your entire school in a thick web that will trap students as they try to enter the school. Renly the Robbing Raccoon has his eye on all the lunch boxes filled with tasty treats. He plans on stealing all the lunches and taking them home to his family of robbing raccoons. And, Thor the Thirsty Rhino is headed directly toward your drinking fountain. He has a powerful thirst and will drink it dry, leaving no water for any student. But that's not the worst of it - more animals are coming! You have just been told that there are 37 different animals attacking your school.

Lucky for you – your school architects have designed a wall that will protect your schoolmates. The white blocks form the perimeter and send a forcefield through the center yellow area. The forcefield will keep all these dangerous animals out. Your job, as School Mathematician, is to discover how many bricks are needed to build your GREAT WALL!

Growth Pattern for your GREAT WALL!



Each white square counts as one block!
Each yellow squares are NOT there! The Yellow squares are a see through forcefield.

ON YOUR OWN

Step A

Follow these Steps:

1. Refer to the prior page. Copy the first three Sections of the GREAT WALL on your paper.
2. Based on the pattern, figure out the 4th section of the wall and draw that section next to the first three sections.

This is an **On Your Own** problem. Complete the problem.
Then Click the link below.

Click on Renly the
Robbing Raccoon



To Watch
This Video

ON YOUR OWN

Step B

Follow these Steps:

1. Create a T-Chart that shows the number of blocks needed to build the 7th section.
2. Solve for the **Iterative Function**, which is also the **Co-Efficient**.
3. Color the Co-Efficient **blue** on each section that you drew.
4. Color the constant **red** on each section that you drew.

This is an **On Your Own** problem. Complete the problem.
Then Click the link below.

Click on Silvia the
Silk Weaving
Spider



To Watch
This Video

ON YOUR OWN

Step C

Create two formulas!

1. Use your iterative function to create your first formula.
2. Use what you know about squared numbers to create a second formula.

Test both formulas against section 5, section 6, and section 7 to make sure that they agree with your T-Chart!

This is an **On Your Own** problem. Complete the problem.
Then Click the link below.

Click on Renly the
Robbing Raccoon



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ON YOUR OWN

Step D

Your school scientists have just discovered more animals!
There are 37 different types of animals attacking your school.

You need a section for each animal.
How many blocks are needed to build the

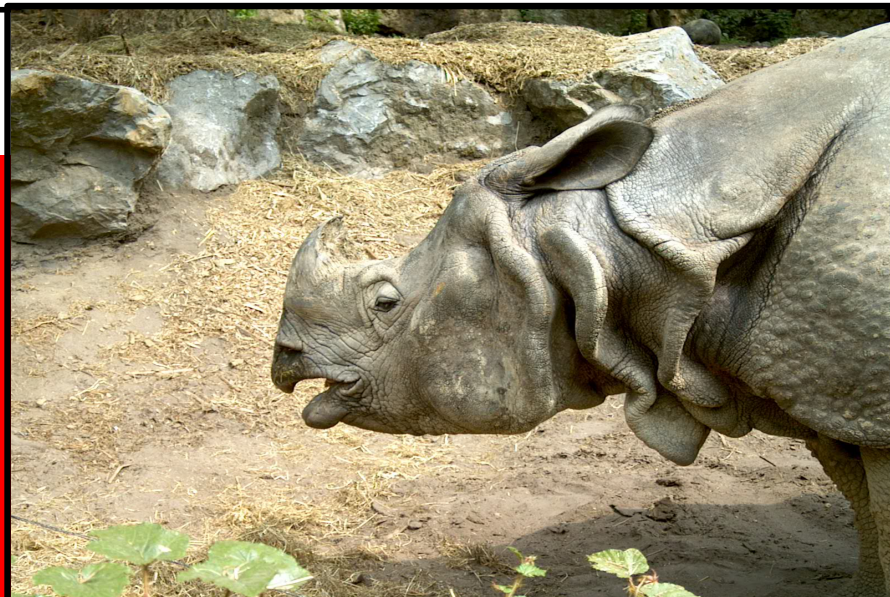
37th

section?

*** Use both formulas to solve for this last section of your great wall! ***

This is an **On Your Own** problem. Complete the problem.
Then Click the link below.

Click on Thor the
Thirsty Rhino



To Watch
This Video

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