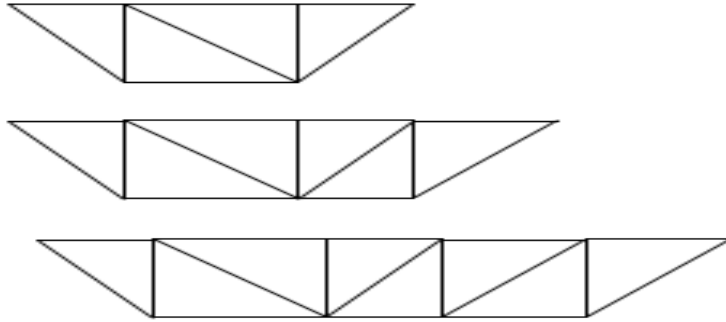


The diagrams below show a new born, 1 day old, and 2 day old 'worm' made from triangles.

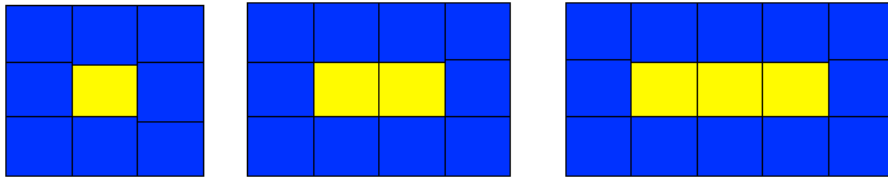


1. What is the relationship between the age of the worm (in days) and the length of the worm? Make a numerical representation of this relationship.

Day	Tiles used to represent length of worm
1	
2	
3	
4	

2. What pattern does the numerical representation reveal?
3. Write a symbolic representation (a function rule) of the relationship between the age and length of the worm.
4. Predict the length of a worm that is 7 days old. Justify your answer.

A dark border is placed around the lighter center tiles.



9

5. What is the relationship between the center tiles and the outer border tiles? Make a numerical representation of this relationship? Label the table's columns.

1	
2	
3	
4	

6. What pattern does the numerical representation reveal?
7. Write a symbolic representation (a function rule) of the relationship between the center tiles and the border tiles.
8. How many center tiles will there be when there are 24 border tiles. Explain your answer.