

Counting

December 10, 2016

1. If 5 islands are connected by bridges, with every island connected to all of the other ones exactly once, how many bridges are there?

2. If 20 dragons go to dungeon party and all shake tails exactly once, how many "tailshakes" are there? (These dragons greet each other by shaking their tails just like humans shake their hands.)

3.	Make red	angles in the diagrams below with vertical and horizontal lines. Use
	the dots as corners. How many rectangles do you see? (Do squares count as rectangles?)	
	a.	 • • • • • • • • •
	b.	• • • • • • • •
	c.	• • • • • • • • • • • • • • • • • • •
4.	Let a, b,	and c above be called 3#3, 3#4, and 4#4, respectively.

a. What is 5#3?

b. Is it the same as 3#5?

c. What do we call that property?