

Below is a chapter draft from our new book *Funville Adventures*. The story begins when Emmy and Leo find themselves magically transported to the world of Funville, a place where the inhabitants have special powers. Each Funvillian has a unique power to transform objects. In Funville, one never knows when something will be copied, shrunk, turned upside down, or erased!

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Chapter 8: A Leveled Playing Field

Emmy and Leo continued walking, chatting excitedly about their adventures so far.

“Look!” Leo exclaimed, stopping suddenly in the middle of the path. “Have you ever seen a tree upside down like that?”



Emmy's eyes followed the direction of Leo's outstretched arm, and she saw a large tree with its branches touching the ground and its roots reaching up to the sky.



As they walked towards the tree to get a closer look, they saw two girls dressed in baseball uniforms. One was reaching into the branches of the upside down tree to retrieve a baseball.

“Oh, hi there!” the other one said, as she noticed Emmy and Leo approach.

Too mesmerized to respond, Leo continued staring at the tree. Though also initially dazzled by the tree, Emmy had recovered enough composure to ask, “How did this tree get upside down?”

“Oh that?” the girl who greeted them explained. “Well I did that of course. I’m Rosalinda, and this is my cousin, Roberta.” She indicated her companion, who was emerging from the branches with the ball in her hand.

“But wait!” said Leo, waking from his stupor. “I still don’t understand how this tree got upside down.”

Rosalinda chuckled. “I’ll show you - just take a step back.”



Emmy and Leo obediently took a step backward, safely away from the tree. Rosalinda waved her hand in the air, and the tree began to spin. It landed right side up again, with its roots in the ground and its branches reaching towards the sky.

“That’s a cool power!” Leo exclaimed.

“It comes in handy,” Rosalinda explained. “Roberta hit the ball into the tree, and it got stuck in the branches. So I rotated the tree upside down so we could get it back.”

“What about you?” Emmy asked Roberta. “What is your power?”

“I rotate things too,” she said. “But a little bit differently from Rosalinda. Here, I’ll show you.”

She motioned towards two bicycles that were leaning against a different tree. Emmy and Leo watched as one of the bicycles rotated vertically into the air, with only one wheel still touching the ground.



“You see?” Roberta continued. “Rosalinda rotates things halfway around. So if she does it twice, they end up back how they started. I rotate things one quarter of the way around, so I have to do it four times before it gets back to how it was. We also have two other cousins Robin and Roy. They also rotate things, but need to use their powers even more times to get all the way around. It’s easy to keep us all straight, because Rosalinda rotates things the farthest, and she has the longest name. And I rotate things the second farthest, and I have the second longest name, and then Robin, and then Roy, who rotates things by the smallest amount.

“I see,” Emmy said. She pondered their respective powers for a moment. Turning to Roberta, she observed, “So since you can rotate things by one quarter and Rosalinda rotates them by one half, you can do everything Rosalinda can do and more.”

“That’s right,” Rosalinda admitted, “but I can do my part faster!”



Meanwhile, Leo was still gazing at the vertical bicycle with its back wheel staying implausibly aloft, and noticed something unusual. “That bicycle has no pedals,” he pointed out.

Emmy turned to look at it more closely. “You’re right!” she agreed.

Leo asked, “How can you ride those without pedals?”

Rosalinda and Roberta exchanged knowing smiles. “Well,” Rosalinda began, “when you ride a bicycle, what do the pedals do?”

“They go round and round as you move your feet,” Leo quickly replied.

“Yes,” Rosalinda agreed, “but why do they need to go round and round?”

Leo thought about this for a moment. He imagined his own small bicycle at home, the one with a cool red stripe and black handlebars. He imagined pedaling it down their street, with the wind on his face.

“The pedals make the wheels turn,” he said. “So a bike has to have pedals!”

“What about when you are going down a steep hill?” Roberta chimed in. “You don’t need to turn the pedals then, right? Because gravity gets the wheels turning even without you turning the pedals.”

“Yeah, that’s true,” Leo said thoughtfully, and indeed, he could remember riding down a hill once without pedaling.

“So really what you need,” Roberta summarized, “is *something* to make the wheels turn. We don’t need pedals for *that* even when we are not going down a hill, because we can rotate the wheels with our powers!”

“Wow, that is so awesome!” Leo said excitedly.

“We like to race our bicycles, and I always win,” Rosalinda bragged.

“Aha! This is where rotating them faster must come in handy!” Emmy realized.

“And poor Roy is always last,” Roberta explained sympathetically. “Even when we are not racing, he is always calling, ‘Wait for me!’”

“Hmmm...” Emmy mused. “I wonder if something can be done to give him a fairer chance.”



“I wouldn’t mind the races being more competitive,” Rosalinda conceded, “it would be more fun. But I’m just faster! And it wouldn’t be fun if I let the others win either.”

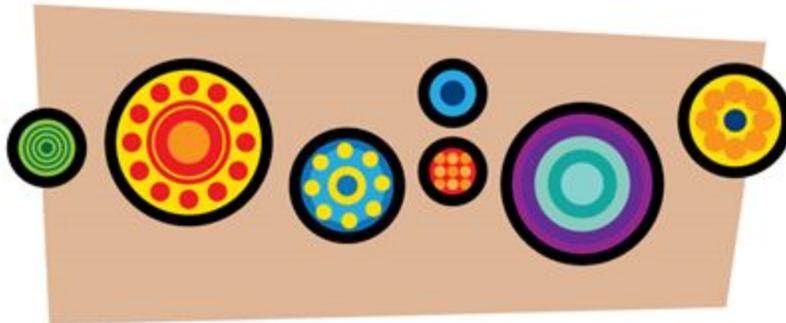
“That’s not what I mean,” Emmy continued. “I mean…” she paused to think. Rosalinda, Roberta, and Leo looked at her expectantly. “Well, I’m not sure what I mean yet,” she said. “But it’ll come to me.”

“Would you like to meet our other cousins?” Rosalinda asked. “We are about to head home and see them.”

“Sure,” Emmy replied. “I would like to meet them.”

Since Emmy and Leo did not have bicycles, Rosalinda and Roberta politely walked their bicycles along the path to their house as they all continued chatting. When they arrived at the house the cousins shared, Leo and Emmy at first perceived it to be quite normal, very much like their own home. There were some toys strewn along the floor, some paintings decorating the walls, and a large table in the center of the dining room.

But something was a bit strange, Emmy slowly realized. While the pictures and paintings on her own walls at home featured a variety of shapes and subjects (like trees, flowers, and her family members), all of the paintings here were of circles, and were perfectly symmetric!



“Interesting decorating,” she remarked.

“Yeah,” Roberta explained. “We used to have other paintings hanging on the walls, but we kept annoying each other by turning them to different angles.”

“I really liked the dog picture upside-down,” Rosalinda chimed in nostalgically. “But Roy liked it better right side up.”



“And Robin liked it halfway between, so it looked like it was standing on its tail!” Roberta continued. “So really there was no rest - the poor pictures were constantly being turned around and around. We decided to stop the madness and got these paintings that look the same no matter how you turn them.”

“I sometimes miss the dog standing on its tail,” a new voice said, coming from a nearby staircase.

Just then, two more Funvillians came into view at the top of the stairs.

“I’m Robin,” the first one said, bounding down the stairs to meet Emmy and Leo.

The second one slid down the railing and got down just a moment before his brother.

“And I’m Roy,” he declared. “My cousins must have already told you how I’m the slowest, but what I lack in speed, I make up for with zeal and charm.” He smiled warmly at them.

“Well I’m glad you don’t lack for self-confidence,” Emmy good-naturedly mocked.

Now reminded of the bicycle races, Emmy thought again about the problem of making them more fair. “I’ve got it. The wheels!” she exclaimed.

“Huh?” Leo expressed his confusion.

“I’ve got an idea for how you can win some of the bicycle races!” She told Roy.

“Really? How?” He asked excitedly.

“Think about the wheels,” Emmy began to explain. “How fast you go is affected by how fast you rotate the wheels, but it is also affected by the *size* of the wheels! If Rosalinda uses a bike with smaller wheels, she will have to turn them faster to compensate, and then the race can be more fair. Rosalinda could use the smallest wheels, Roberta’s wheels could be larger, and then Robin’s wheels could be even larger, and your wheels could be the largest of all! That way it could be even, since Rosalinda now has to turn the small wheel more times to cover the same distance.”

“That’s an excellent idea!” Roberta chimed in. “We can get wheels of different sizes to make our races so much more suspenseful!”

