

This article appeared in the Carolina Day School parents newsletter.

Carolina Day builds a math dynasty

“It’s Bedlam.”

That’s how Candy Hardy, a mathematics teacher at Asheville’s Carolina Day School, describes what went on in her classroom at Thursday lunchtime last fall and winter. And no wonder: every week for four months one of Carolina Day’s teams came there to eat lunch and get ready for competition. But on April 7, this team racked up its eighth first place finish in twelve years of competition, so the venue must work.

What sport does Carolina Day dominate so effectively? Mathematics. Since Hardy first organized a team in 1992, her students have built a dynasty in the High School Mathematics Contest hosted by Western Carolina University, part of a statewide network of math competitions.

“We have a good time,” says Hardy of the Thursday practices, in which students work math problems with some help from the Carolina Day math department. The students feel the same way. “It’s fun sometimes to come up here and joke around with the guys,” says Landon Brown, a rising senior who first competed as a freshman. “I mean it’s not really serious.” And it isn’t just the camaraderie: Brown finds the math itself enjoyable. “It can be pretty exciting,” he says, “when you’re doing a hard problem and you finally get it.”

The problems Brown and his teammates face come from exams written by the WCU math department, which has hosted the competition for over thirty years. On the day of the contest, the students get 80 minutes to complete 40 multiple-choice questions like “What is the domain of the function $f(x)=\log(\log(\log(x)))$?” and “Written as an algebraic expression, what is $\cos(2 \arccos(A))$?”

This year 31 schools sent a total of 600 students to the competition to take exams in one of three subjects—algebra, geometry, and a comprehensive category that includes calculus. High individual scorers go on to a state contest, but teams have only this one chance to claim victory by getting the highest average score.

The sudden-death aspect of the contest makes for a more intense experience, according to Landon Brown. “Once you start doing the test you say, ‘I really want to do well on this,’ because we’ve got a record to hold up,” he says. “The teachers put in so much effort—they give up their lunch to come in and help us with stuff we don’t know, so I want to do well for them, and you also want to do well for yourself.”

Nevertheless Brown is philosophical about his performance, especially on the last few exam questions, which tend to be the hardest. “When you’re up against a question like that, you kind of realize that no one else is going to get it.” His low-key approach to the competition may come from Hardy, who sees coaching as an extension of teaching, and who takes pains to remind her students

they're on a team. "I just want them to do their best," she says, "I try to remind them that it's the team score that matters."

The annual competition was actually one of the first to be held in North Carolina, according to contest chairman Ralph Willis. Willis, a professor of math and computer science at WCU, started the contest in 1970 after having won—and later coordinated—a similar contest in Tennessee. He has stayed with the contest over the years in part because, having won a scholarship that helped him through college, he feels he is "repaying a debt to society."

Willis insists, however, that the students are the main reason he and

other professors around the state organize, manage, and score these competitions. "We hope to give students recognition for excelling in an academic area," Willis said, "a pat on the back, just like you would give an athlete."

Candy Hardy feels that Willis and his colleagues have succeeded. Her students, she says, are "excited when they know they've won. They're pretty proud when they get back, and they should be." And according to Landon Brown, the pride extends into the entire school. "I think people pay attention. It's still the math team, but I think people realize that our school does really well in it. When you can stand up and say, 'We won this competition,' people notice."