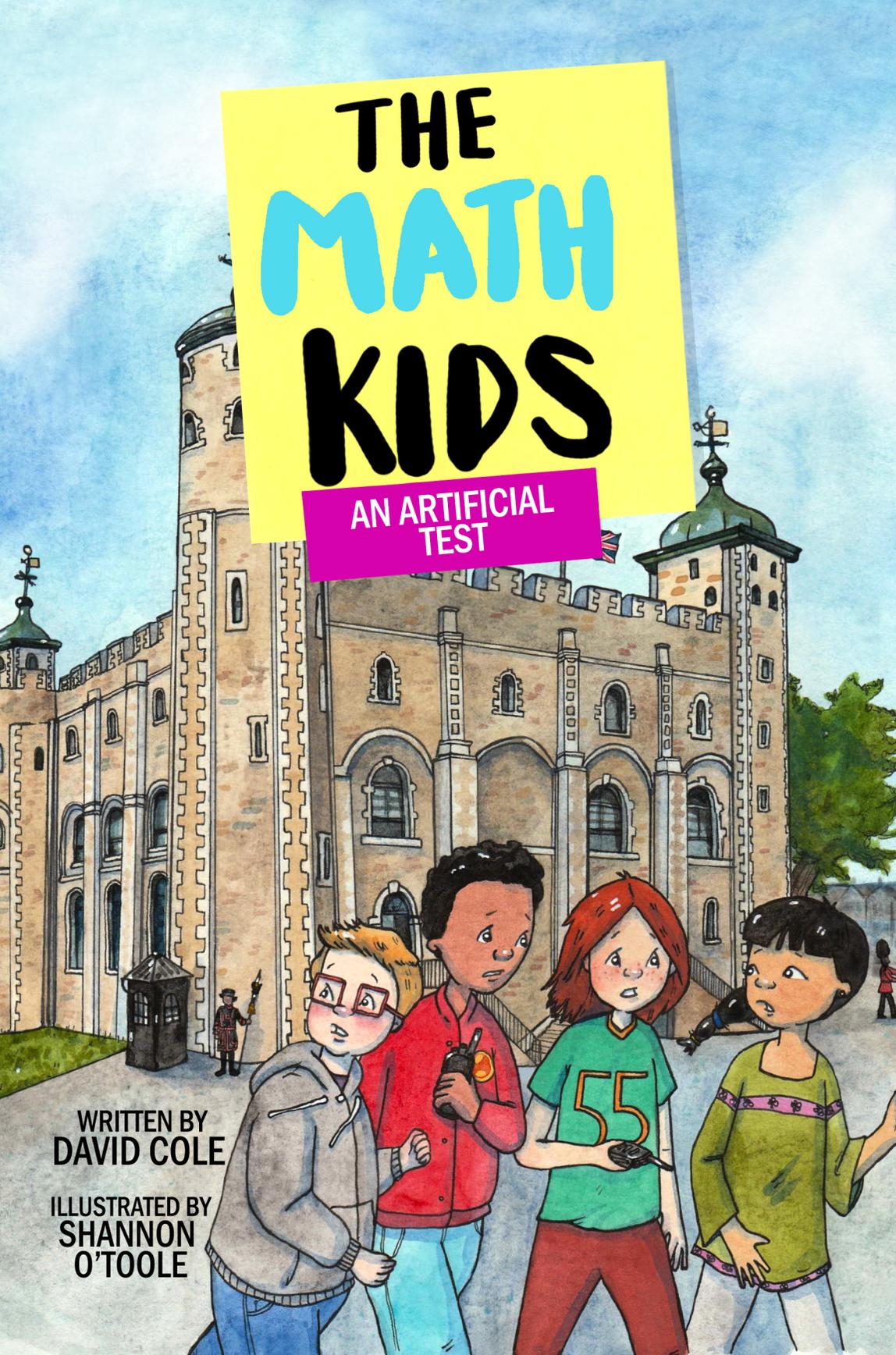


# THE MATH KIDS

AN ARTIFICIAL  
TEST

WRITTEN BY  
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# *An Artificial Test*



*Book 8 in The Math Kids Series*

by

**David Cole**



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# Chapter 1



“Okay, everyone, we’re almost ready for takeoff, so it’s time to get those seatbelts fastened,” the pilot said over the loudspeaker.

“Wow, this jet is amazing,” Stephanie Lewis exclaimed as she looked around at the beautiful teak wood, the thick blue carpet, and the subdued lighting.

“It’s a Gulfstream G650ER,” Justin Grant said from the seat behind her. “This baby can go more than seven hundred miles per hour and fly eighty-six hundred miles without refueling.”

“What a shock,” Catherine Duchesne said with fake surprise. “Justin read up on all of the jet stats before the trip.”

“And I didn’t even tell you the most important thing,” he responded. “This jet cost more than sixty-six million dollars. Sixty. Six. Million. Dollars.”

“That’s not the most important thing,” came the voice of Jordan Waters, Justin’s best friend since kindergarten. He

was sitting across the aisle from Justin and was grinning from ear to ear. This was Jordan's first time on a plane, and the fact that it just happened to be on a custom-designed luxury business jet owned by billionaire Willard Howell was definitely an added plus.

"What's more important?" Justin asked.

"Whether or not they serve dinner on this plane," Jordan retorted.

Aimee, the flight attendant, overheard the conversation and answered. "Yes, there will most certainly be dinner. I believe Mr. Howell ordered up something special for you."

"It's not some fancy stuff, is it?" Justin asked anxiously. "You know, like snails or caviar or something like that?"

"What's caviar?" Jordan asked.

"Fish eggs," Justin said.

"Yuck!" Jordan said. "No fish eggs for me, please. And no green stuff like salad or brussels sprouts."

Aimee smiled. "I think you'll be happy with Mr. Howell's menu choices. How do hamburgers and French fries sound?"

"Now you're speaking my language," Jordan said.

"And I believe we have everything we need for hot fudge sundaes for dessert," Aimee said.

"Now you're *really* speaking my language!"

The four friends settled back into their plush leather seats, checked their seat belts, and looked out the window as the jet began to taxi out to the runway. They

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were going into sixth grade in the fall, but they had one more special adventure before that happened, so school was the last thing on their minds.

It all started when Justin's dad, a software development manager, was offered a new job that would have required the family to move to St. Louis, far away from his best friends. At the same time, Catherine's dad, a math professor at the local university, had come up with an idea for an application that could solve complicated problems. Jordan was able to recognize the two should be working together and contacted Mr. Howell to finance it. Mr. Howell had agreed and G-Knot, the new company, was off to a great start. Two months later, Mr. Grant and Mr. Duchesne were heading to London to demonstrate the initial version of the software to some potential customers. It was Mr. Howell's suggestion that the four kids join them on the trip.

"Are you sure?" Justin's dad had asked when Howell had brought it up.

"Why not?" the eccentric billionaire had asked. "Look, the Math Kids have proven themselves to be very capable. I think it's high time they get to put math aside for a couple of weeks and see the world. You can all fly over on my jet, and I'll meet you there in a week when I'm done with my meetings in New York."

The Math Kids was a club Justin, Jordan, and Stephanie had formed when they were in fourth grade. Catherine had joined when they needed another person for the district

math competition. The club was originally created around the love they had for solving math problems, but it turned out their math skills were useful for solving real-world problems too, including catching some neighborhood burglars, finding a fortune in lost gold, and rescuing Catherine's dad from kidnappers.

As soon as the decision was made for the kids to go, there was a flurry of activity—getting passports for everyone, booking hotels, and arranging for a guide for the kids. Now, the kids and Justin and Catherine's dads were all on a private jet headed to London, England.

"We've been cleared for takeoff," the pilot announced.

"Here we go," Jordan said, his fingers tightening on the armrests. The engines roared and the jet sped down the runway and soared quickly into the evening sky. Everyone stared out the windows and watched the houses grow smaller and smaller. Soon everything was lost to sight as the jet passed through a bank of clouds. Justin pulled a small book out of his overstuffed backpack and began thumbing through the pages.

"You brought a book?" Jordan asked incredulously. It was summertime and Justin was not much of a reader even when they were in school.

"It's a language guide," Justin said.

"You do know they speak English in England, don't you?" Stephanie teased.

"Yeah, but not the same English we speak," he said.

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"For example, what we call chips in the United States are called crisps in England. If you ask for chips over there, you'll get French fries—you know, like fish and chips? And a biscuit over there is what we would call a cookie."

"Interesting," Stephanie said. "Does your little book have any translations other than food?"

"It sure does. Here's one for you. What we call soccer—you know, that game you play all the time—the English call that football. Not at all like the *real* football we have in the States."

"I knew that one," Stephanie said, smiling at his comment about her favorite game. "Anything else we should know?"

"Well, don't compliment someone on their pants," he said.

"Why not?" Jordan asked.

"Because pants are what they call underwear over there," Justin said.

"Nice pants, Justin," Stephanie said, giggling as Justin turned a deep shade of red.

An hour into the flight, Aimee brought trays with burgers and fries. While they were eating dinner, the four friends talked excitedly about their plans for the trip.

"I want to go on the London Eye," Jordan said.

"I want to go to Stonehenge," Catherine said.

"I want to see where they did the executions at the Tower of London," Justin added.

"That's a pleasant thought," Stephanie said. She frowned at Justin.

"Well, it's true," Justin protested. "There were twenty-two people executed there!"

"There will be plenty of time for everything," Catherine's dad said as he walked up the aisle from the back of the jet where he and Justin's dad had been discussing their meeting plans.

"In the meantime, how about you finish off that last fry and try to get a little sleep so you'll be ready to go when we land?" Justin's dad asked.

"Wait, we can't go to bed yet!" Jordan exclaimed.

"Why not? Is your head too full of ideas about what you want to do?" Justin's dad asked.

"No, my belly is too empty," Jordan responded. "Aimee promised us dessert."

"And I always keep my promises," Aimee said as she produced a tray of bowls heaped with ice cream. "Who's ready for ice cream?" She poured hot fudge onto the ice cream and added whipped cream and a cherry on top.

"Does your guide have a word for this?" Stephanie asked.

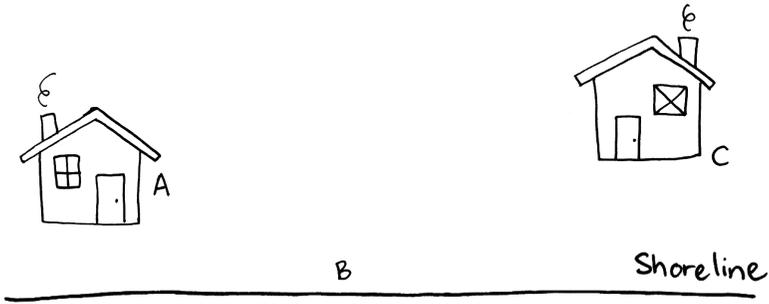
"Delicious," Justin answered with a grin.

After the hot fudge sundaes, they still weren't ready for bed. "How about a math problem, Mr. Duchesne?" Jordan asked.

"Okay, just one and then you should get some sleep," he answered. "Let me think of one that's short and sweet."

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He thought for a moment and then nodded his head.  
"Okay, I've got one for you. I'll have to draw it out for you."



He pulled a sheet of paper from his notebook and drew a quick sketch.

"A fisherman was going to his friend's house for dinner. He agreed to bring some fresh fish. Where should he stop at the shore to fish so that his journey is the shortest?"

**Wait! Do you want to try to solve this puzzle before the Math Kids do?**

**Where should the fisherman stop at the shore to fish? In other words, how can you show the shortest route from A to B to C?**

"Uh oh," Jordan said. "I'm not very good at geometry. This is one of those tricky triangle problems, isn't it?"

Mr. Duchesne smiled. "I'm sure you could figure it out with some triangles, but I promise you there is an easier solution. In fact, you can solve this one in two minutes with nothing more than a simple drawing." With that cryptic clue, he returned to the back of the plane.

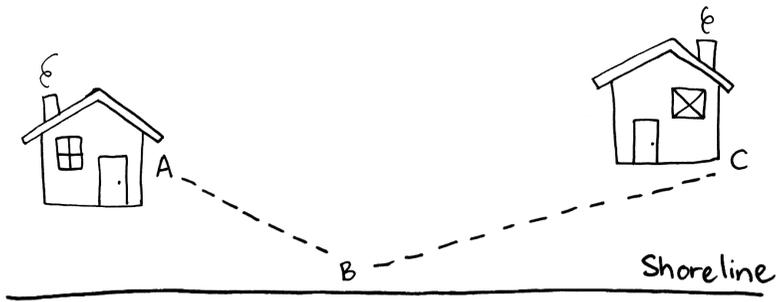
David Cole

"Your dad may say this is easy," Jordan said to Catherine, "but he also has, like, a dozen math degrees. I bet it's harder than he says it is."

"Possibly," she answered, "but I think maybe he was trying to give us a clue by saying we could solve it with a simple drawing."

"Well, you're the artist," Justin said. He handed her a pencil. "Draw away!"

Catherine stared at the sketch her father had drawn while her three friends watched expectantly. She drew in some dashed lines to show the route the fisherman would have to take to the shoreline and then on to his friend's house.



"I don't know," Jordan said. "I mean, that's the shortest path if that's where B is, but we don't really know where B is, do we?"

"That's a good point," she said. "That's the real question. You know, it would be a lot easier if the fisherman lived

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out in the sea. Then we could just draw a straight line from his house to his friend's house."

A huge smile broke across Stephanie's face. "That's it!"

"That's what?" Catherine asked.

"Let's move the fisherman's house into the sea. Make it just as far from the shore as his house is now."

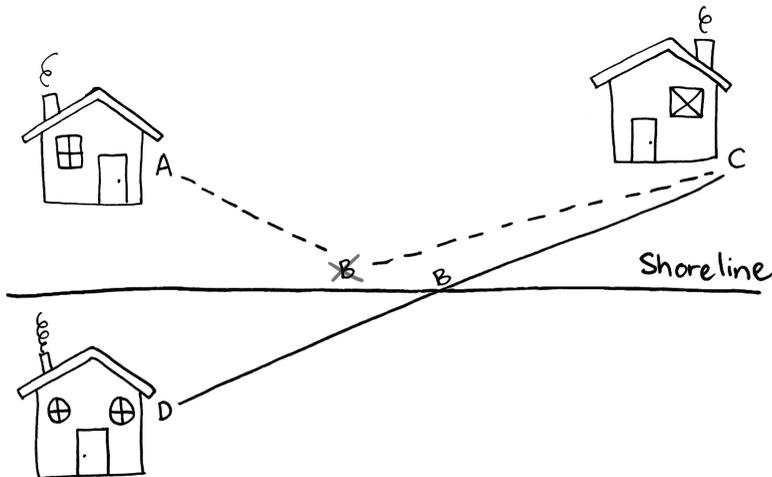
Catherine looked dubious but added another house out in the water.

"Okay, now draw a line from C to the new house," Stephanie said.

Catherine did as Stephanie requested.

That's when Jordan saw where Stephanie was going. "Where the line between D and C crosses the shoreline is where he should fish!" he said excitedly.

Catherine crossed out the original B and moved it to the new line.



"Since the house in the water is the same distance from the shore as his real house, we know the distance from A to B is the same as the distance from D to B," Stephanie said.

"And we know the distance from D to C is the shortest route because the shortest distance between two points is a straight line," Jordan added. "Your dad was right! The problem really could be solved with a simple picture."

Catherine's dad heard the commotion and walked up to see what the kids were up to. He smiled when he saw the drawing.

"Nailed it," he said. "And now, let's get some sleep."

They reclined their seats to form beds. Aimee supplied pillows and blankets and dimmed the lights. Within minutes, the four were drifting off to sleep forty-one thousand feet over the Atlantic Ocean.

Two rows back, the two dads talked quietly.

"Hmm, this doesn't look good," Mr. Grant said.

Justin's eyes popped open and he craned his neck to see that his dad was looking at something on his laptop.

"What's that?" Mr. Duchesne asked.

"This news article says London is under a heightened security level due to suspected terrorist activity. Just chatter so far, but the authorities are concerned," Justin's dad said.

"Well, since we'll be meeting with the folks from Scotland Yard, I'm sure we'll hear all about it."

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"You think the kids will be okay on their own?"

"I'm sure they'll be in good hands with the guide Howell hired," Catherine's dad replied. "Besides, the kids have a good eye for recognizing trouble."

"That's what I'm worried about," Justin's dad said. "If there is trouble to be found, our kids seem to have a knack for finding it."

Concerned about what he had heard, it was a long time before Justin was finally able to fall into a fitful sleep.