

Numberphile Podcast Transcript

Episode: The Parker Quiz - with Matt Parker

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Matt Parker takes a quiz prepared by Brady. The [YouTube version of this quiz](#) contains a few visuals.

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Many of the links below contain QUIZ SPOILERS.

[Matt Parker is standupmaths - his website has links to most stuff](#)

[Matt's books on Amazon](#)

[Matt's first appearance on this podcast](#)

[Matt's videos on Numberphile](#)

[Terry Tao on Numberphile](#)

[Good Will Hunting which is directed by Gus Van Sant](#)

Two Numberphile videos about Good Will Hunting are [here](#) and [here](#) - featuring James Grime

[Newton](#), [Euler](#), [Gauss](#), [Ramanujan](#), and [Turing](#)

[Newton videos from Brady's Objectivity channel](#)

[Millennium Problems](#)

[Festival of The Spoken Nerd, featuring Matt with Steve Mould and Helen Arney](#)

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[gentle piano music plays]

Brady Haran [BH]: Hi everyone, something different today. Our guest is Matt Parker, he's one of the most familiar faces in our videos. Now Matt's been on the podcast before talking about his life, his career, and you can go back earlier in your feeds and find that episode. But today I invited Matt here with seemingly no plan, then I surprised him with a lockdown quiz that I'd prepared in secret. Now it's supposed to be fun, just to chance to joke around during these strange days, but I invite you all to play along, maybe grab a scrap of paper to keep of score. We'd certainly love to hear how you do. But please do bear in mind many

of the questions are supposed to be like... fun, more messing around than truly a test of knowledge all the time.

[gentle music box]

BH: So Matt the world has been in lockdown. You of all people is someone who I think of as being everywhere and doing a million things at once and, you're quite a flighty bird. I can't imagine how it's been, sort of being a caged bird for you.

Matt Parker [MP]: Both like very, comforting and satisfying and very surreal, so you're absolutely correct, I'm normally traveling a ridiculous amount and I should've done a UK tour during the lockdown. I had a run of maybe ten or twelve like due to adequate demand extra tour dates on my Humble Pi tour and they all got canceled and postponed.

BH: Yeah.

MP: And so, I think Lucy, my wife, and I have set a new... definitely marriage record, potentially relationship record, of number of consecutive nights spent in the same place.

BH: [laughs] Is that a good thing or a bad thing?

MP: I don't know.

BH: [laughs]

MP: We've actually put in the diary, mid next month we will have one hundred consecutive nights spent in the same bed together.

BH: Wow.

MP: And so... we're have a little celebration, we'll put in the diary. I think now we're like well over seventy and so, we can't think of a time we've both been in the same place for as long and so it was good to know that our marriage wasn't successful solely because both us traveled a lot and we weren't around each other all that much.

BH: [laughs] Excellent.

MP: It's... thankfully we're doing okay.

BH: What are you doing? Like, what's taking most of your time?

MP: Yeah well all the live stuff just went and so I used to do a lot of obviously stand-up performance and so the tour went, the regular gigs in London that I do all went and then also all the work I do with schools just evaporated.

BH: Yeah.

MP: So both the Maths Inspiration shows, which are like the big shows I do, you know with James Grime and everyone else, Rob Eastaway, they all got canceled. And Maths Fest got canceled and then visiting schools that all got canceled. And so the live, anything that involves me standing in front of an audience obviously, audiences are frowned upon now.

BH: Yeah.

MP: So that all just disappeared. Thankfully though, the rest of my career is a combination of, obviously making Youtube videos...

BH: Yeah.

MP: ...which I can do from the comfort of my own study and writing books.

BH: Yeah.

MP: And previously I was planning to do a lot of writing work kind of after the summer and so I just mentally thought, you know what, I'll... instead of touring now and writing after the summer, I'll just swap them. So I'll do more writing now and more touring afterwards.

BH: Touch wood.

MP: [laughs] Yeah. Neither aspect of that deal has quite worked out but we'll see.

BH: Have you been doing a lot of quizzes?

MP: Too many quizzes. Oh my goodness. I've... never had to do so many quizzes in my life. Our record, we did five in one weekend.

BH: Oh Matt, I've got bad news for you.

MP: Oh no. What? What? Have you got a quiz lined up?

BH: Yep.

MP: Oh my goodness! Oh! [groans] Well... I've never been so prepared and trained for a quiz...

BH: [laughs]

MP: ...in my life as I am now.

BH: I've made for you in the last few hours, the special exclusive Parker Quiz.

MP: Oh my goodness.

BH: The Parker Quiz.

MP: The Parker Quiz. Oh...

BH: Yeah.

MP: Well I can already see how this is gonna go. [laughs]

BH: [laughs]

MP: [laughs]

BH: It's like it's tailored! It's tailored to you. It's tailored with you as the person doing it. That was very much in the front of my head as I wrote the quiz.

MP: I'm gonna start grateful and I will update that regularly.

BH: Yeah. I think it will change from question to question probably.

MP: Do I need paper and a calculator like what's the... [laughs]

BH: Well... I mean I... I can't imagine you haven't got paper and a calculator with you but... [laughs]

MP: I've got... um...

BH: You won't need it.

MP: Three calculator... yeah... okay, good, good, good.

BH: [laughs]

MP: I was just looking 'round my office going which one's closest, probably the Casio.

BH: Yeah? [laughs]

MP: [laughs]

BH: Now I know people at home will want to play along. There are some they will be able to get, there are others well maybe they won't. But if you wanna play along at home please do and let us know how you got along. But I guess we'll go through these questions.

MP: Yeah.

BH: See how it goes.

MP: I'll be very keen to see how other people do.

BH: Yes.

MP: See where on sit... see where I sit in the pack on my own quiz.

BH: Yeah. So we'll add up your score as we go and people can tell us what they're score is, so Matt like a true professional if you do know the answer, like, don't blurt it out straight away, give the people at home a chance to pause and, you know.

MP: It's not gonna be easy to give the impression I don't instantly know all

the answer but I'll do my best to...

BH: Alright.

MP: ...hold some of them back.

BH: How are you feeling about this? Are you like, apprehensive? I mean obviously I have a track record of dropping you in it. So...

MP: I'm somewhere... exactly I'm somewhere 'round thirty-five percent apprehensive.

BH: Yeah?

MP: And I'm somewhere around sixty percent excited. And then there's like a little five percent of, what's Brady actually up to.

BH: X factor.

MP: Yeah.

BH: Like just five percent of X factor.

MP: Yeah, yeah.

BH: [laughs]

MP: There's... there's... yes.

BH: As I've said I've written this quiz with you in mind.

MP: Mhm.

BH: So I'm starting with question zero.

MP: Excellent! Oh, I already love... this is already my favorite quiz.

BH: [laughs] Alright, question zero. The famed Terrance Tao regarded by some as the greatest living mathematician...

MP: Yep, including me.

BH: ...was born in what city?

MP: Oh... I... I... I'm starting to see your own bias coming through in this quiz, Brady.

BH: [laughs]

MP: So, I mean, I... by the way when I say including me I mean I also regard him as the greatest living mathematician.

BH: Okay. Right.

MP: And it's fantastic that an Aussie has that title.

BH: Yes.

MP: And as you know there are many... many cities in Australia which produce people of a wide range... of calibers.

BH: Hmm.

MP: But I think... he's probably Adelaide's greatest gift to mathematics.

BH: [laughs] He most certainly is.

MP: [laughs]

BH: [laughs]

MP: [laughs] I don't know who else is on the list but it's definitely Terry in number one.

BH: I don't know if we should do the answers at the end or as we go. Maybe we should just do them as we go.

MP: So you're gonna mark me as we go along?

BH: I'm gonna mark you, yep.

MP: You okay?

BH: Yes, so you get a point. That is correct. [chime dings]

MP: Hey. One point!

BH: He is from the great city of Adelaide. We're also almost the same age, Terrance Tao and I.

MP: Really?

BH: I too am from Adelaide by the way, people, in case you didn't know that. And I am not the world's greatest contribution to mathematics, but...

MP: And was there any chance that you overlapped going through the

education system in Adelaide at the time?

BH: Well no, because by that at the age of four he was already at university of something.

MP: Oh Yeah. Yeah.

BH: [laughs]

MP: [laughs]

BH: No we didn't cross paths. I have met him since though for a Numberphile video.

MP: Yes.

BH: I tried to bond with him over Adelaide stuff but... I don't... I don't think he was feelin' it. Okay the next question is a music question.

MP: Oh dear.

BH: I want you to identify... this piece of music. And I'm gonna have to play it off my phone into the microphone but I think we've probably got a good enough connection so.

MP: Oh yeah.

BH: Are you ready?

MP: I'm ready.

[thematic strings and piano music song plays]

MP: It feels like a film soundtrack...

[music continues, flute and woodwinds play]

MP: Oh, I know what this is.

[music continues]

MP: It is a film soundtrack, isn't it?

[music continues with chimes and guitar joining in]

BH: Alright, you've had enough? You've heard enough?

[music continues and fades out]

MP: Oh I've gotta guess... I've gotta guess, now that I've thought of my guess I can't unthink of it.

BH: Okay, go ahead.

MP: It just... I was thinking you were gonna play in like some maths piece of music or like oh, that's the music we had commissioned for the calculator testing sequence on video whatever, but it sounds an awful like the soundtrack from Titanic.

BH: Well. [buzzer] No. [laughs]

MP: No! What is it?

BH: [laughs] You were right, it is a movie soundtrack.

MP: Is it... oh...

BH: I would... you kind of should've stayed in your lane a little bit.

MP: Oh really is like Beautiful Mind or... uh... The Man Who Knew Infinity or something?

BH: It is... Good Will Hunting.

MP: Good Will Hunting!

BH: Ahh. I thought you'd nail that. I'd though... when you said film score I thought oh he's nailed it.

MP: No, no, no. Do I get a percentage of the point for genre or is that not how we're doing it?

BH: No. No.

MP: No? Fine. [grumbles]

BH: No, I don't think so. I think that's zero I'm afraid. I can't give a point for that.

MP: I scoring separately here at home. I'll do that.

BH: Okay [laughs] the alternative score.

MP: Yeah.

BH: So...

MP: Would you believe I've not seen Good Will Hunting?

BH: Have you not?

MP: No.

BH: Oh dear. Well you're not gonna like the next two questions then, 'cause this is the Good Will Hunting section. [chuckles]

MP: Oh my goodness. Like I've watch James Grime's Youtube... like Numberphile video about it.

BH: [laughs]

MP: But I don't... [laughs]

BH: Well I don't think you'll get the next question then.

MP: Oh okay.

BH: But here we go. I'll ask it anyway for people playing at home. Question two, is who directed the film Good Will Hunting. I'm guessing that's gonna be a blank from you.

MP: Oh. [sighs] Yeah...

BH: Yeah.

MP: Oh... who was in that? It was um... what's his name and what's his face.

BH: Yeah they were, they were in it.

MP: Yeah those guys. Matt Damon and... thing a ding.

BH: Yes.

MP: Yeah. Uh... so I'm gonna go with Matt Damon...

BH: [laughs] It was not. [buzzer] Although he did write it interestingly enough.

MP: Oh, yeah, I knew there was some...

BH: Yeah.

MP: ...like a behind scenes thing where they were shopping around the script for ages.

BH: Yes. And question three. You could guess this, so you may as well have a stab. How many academy awards did Good Will Hunting win?

MP: Oh, like some ridiculous number. What's a big number?

BH: I'll give you a clue, it's a prime number.

MP: [laughs] Okay. Okay. I reckon they won... like... 'cause I know like seven is a lot.

BH: Hmm.

MP: Five is also a lot, but seven's like probably like, up near record levels, and three would be adequate, two's fine... yeah I'm gonna go with seven.

BH: It was... two. [buzzer]

MP: Two!

BH: Yeah.

MP: Yeah?

BH: Robin Williams was the Best Supporting Actor and Ben Affleck and Matt Damon won it for their original screenplay.

MP: Well there you go.

BH: Yeah. Alright, next question, Matt. This is question four. I'm gonna read you the name of five mathematicians, I'm gonna read them in the order that they were born into this world.

MP: Right?

BH: But I want you to change the order. I want you to put them in the order of how old they were when they died.

MP: Oh okay...

BH: So the oldest, the one who lived the longest will be first...

MP: Got it.

BH: The one who died the soonest will be last, obviously.

MP: Got it, got it, descending age of death.

BH: You've got it.

MP: Go.

BH: Here are your names.

MP: Yep.

BH: Newton.

MP: Newton.

BH: Euler.

MP: Euler.

BH: Gauss.

MP: Gauss.

BH: Ramanujan.

MP: Yep.

BH: And Turing.

MP: Turing... okay so they were in chronological order.

BH: Mhm.

MP: Okay so Turing... Turing sadly died in the... fifties... I wanna say around '54ish but I'm guessing.

BH: But they year they died you realize is irrelevant.

MP: Oh yeah but then I'm gonna... guess what year he was born, and that's gonna give me a rough ballpark.

BH: Oh, okay.

MP: So I think he died around '54.

BH: Hmm.

MP: I think he was born around... oh goodness. When...

BH: I didn't think you'd go into this much detail to solve this.

MP: I reckon... oh god... I reckon he died probably mid thirties. That's my guess. Okay maybe thirty-five, fortyish. Okay, Ramanujan was writing to Hardy around... just before the First World War, he died pretty young, I think Ramanujan died just younger than Turing. So I'm gonna put five and then four.

BH: Okay.

MP: Gauss... Gauss did a lot, but... Newton was super old when he died. Euler, I don't know. I mean Euler did a lot but reasonably youngish so I'm gonna say that... okay here we go, so...

BH: Yep?

MP: Final ranking.

BH: Yep.

MP: Newton was the oldest, position one.

BH: Right.

MP: I think then this could go either way but I'm gonna say Euler was two, Gauss was three and then Turing then Ramanujan. So it's the same ranking as yours except I've just swapped the last two.

BH: So, Matt. You did really well there. I'm gonna give a point for each slot that was correct.

MP: Yep.

BH: The only mistake you made was Euler and Gauss, you got them just the wrong way around.

MP: Ah, I should've swapped them to.

BH: Gauss was slightly older, but they were actually Newton was eighty-four when he died, Gauss seventy-seven and Euler seventy-six, so you were...

MP: Oh wow that is close.

BH: You were so unlucky. You were unlucky there. And Turing was forty-one.

MP: Okay.

BH: Ramanujan, thirty-two.

MP: Alright. That's an adequate... yeah that's good.

BH: I'm giving you three points there from a possible five.

MP: Thanks!

BH: Well done. [three dings] Okay, here's the next question. What are the seven Millennium Problems?

MP: Oh... [sighs]

BH: [laughs]

MP: [heavy sigh] Okay so...

BH: I should set a timer, shouldn't I? [laughs]

MP: Let's start... I don't... obviously I know them instantly but people are playing along at home and I respect that. So...

BH: Yeah.

MP: Obviously we're gonna have the Riemann Hypothesis.

BH: Yes.

MP: So, I'm just gonna get that one out of the way.

BH: I'll give you a point for each one you get. So yes. [dings]

MP: That's done, boom, out of the gate. Okay. Up next we're going to have, well Fluid Dynamics is gonna be the Navier-Stokes. I'm going from more mathsy down I think.

BH: Yes, Navier-Stokes is one. [dings]

MP: That's a big one. Then there's... the Yills... Mills-Yang... which is the Mass Problem in physics, about mass.

BH: Yep. Correct. [dings]

MP: Okay, that's three. How many more do I need? Another four.

BH: Yep.

MP: Wait you said seven.

BH: Seven.

MP: So the Poincaré Conjecture counts.

BH: Yes it does.

MP: As one of the problems despite being solve.

BH: Yes.

MP: Okay so I'm gonna have Poincaré.

BH: Yes. Point. Yep. [dings]

MP: Um. [sighs] Now okay I've got three then I'm missing.

BH: I feel like there's one that you should definitely get, and the other two. Oh I dunno. I wouldn't have known them but you probably do.

MP: Oh I'm gonna kick myself when... when you give 'em away. I mean Twin Primes... I feel like that's not one. I'm not a hundred percent convinced it's not. And what else is on that list. You know what? I'm going to guess Twin Prime and then I don't know the other two.

BH: Alright. So...

MP: Is it a magic square where all the numbers are square?

BH: [laughs] No.

MP: Oh! Oh. That's the kind of caliber problem I'm thinking about.

BH: Hodge Conjecture is one.

MP: Hodge.

BH: Birch and Swinnerton-Dyer.

MP: Oh!

BH: And the one that you'll...

MP: Yeah.

BH: ...kick yourself is P versus NP.

MP: Oh of course it's P versus NP! Argh!

BH: Yeah. Alright.

MP: Oh that's embarrassing!

BH: Nah, this happens in the fire of a quiz.

MP: Sorry everyone out there who was yelling P versus NP.

BH: [laughs]

MP: [sighs] I knew that.

BH: Question six. What would the word maths score in a game of scrabble?

MP: Oh no! Okay.

BH: [laughs]

MP: I'm writing out maths in front of me.

BH: [laughs]

MP: Now. I'm hoping... 'cause I'm gonna have a lot of error bars on these.

BH: Yeah?

MP: It all cancels out.

BH: Yeah.

MP: So I reckon A is gonna give you one point, T is gonna give you one point. They're both pretty straight forward. What's the maximum value? They go... it's up to like seven, doesn't it, on a Scrabble tile? [groans] Roughly.

BH: [laughs] Roughly, yeah.

MP: Let's say... that an M is gonna give you three points. The H is gonna give you three. S, you can tack an S on anything! So... I'm gonna say... one that can't be a high scoring tile, surely, so if I add those up I've guessed nine but I feel like I've lowballed that but I'm gonna stick with it. Nine points.

BH: Oh, Matt. It was ten. [buzzes]

MP: Ah! [groans] C'mon!

BH: The H was a four.

MP: H was a four. It was the only one I was off?

BH: Yeah.

MP: Well. I mean that's the power of estimation for you. You get close.

BH: You should've just added that one. I mean you get zero points that was good play. It was a good effort.

MP: Thanks. Thanks.

BH: Alright.

MP: That's kinda my thing. [laughs]

BH: [laughs] Yep. Alright. The next section is fill in the blank word or words.

MP: Okay.

BH: And these are either reviews of your performances or...

MP: [laughs]

BH: ...books.

MP: [laughs]

BH: [chuckles]

MP: Okay, okay.

BH: Alright. Question seven. This comes from the Wee Review of your Humble Pi stage show.

MP: Got it, Wee Review.

BH: Here's the quote. Humble Pi is a charming mix of Eighties nostalgia, full on geekery and really excellent blank.

MP: Oh. I mean Eighties nostalgia because I play Pac-Man live on stage.

BH: Yeah. [laughs]

MP: Geekery is heavily implied.

BH: Yeah.

MP: So the other... oh thing is there are lasers in the show and that offer got a mention in a review. They've already mentioned... 'cause most reviewers get a little fixated on the... just absolute... [pause] uh... nerdy... unashamed nerdiness and mathematics.

BH: Hmm.

MP: In what is been billed as a comedy show.

BH: I feel like you're reviewing it now, Matt. [laughs]

MP: Uh, exactly! And....

BH: [laughs]

MP: All dates are on standupmaths.com/shows so I reckon it's gonna be lasers.

BH: [laughs]

MP: I think lasers is the final word.

BH: Okay. I'm afraid that's incorrect. [buzzers]

MP: Ugh.

BH: It was eighties nostalgia, full on geekery and really excellent puns.

MP: Puns!

BH: Puns.

MP: Puns.

BH: Okay.

MP: Oh.

BH: Now we're gonna hear from Matt Buck on Amazon...

MP: [laughs]

BH: ...talking about your book...

MP: [groans]

BH: ...Humble Pi.

MP: [sighs] There's a very high variance in the...

BH: [laughs] Matt says your book is, enjoyable but not enough blank.

MP: Oh wait. This would be enjoyable but not enough maths. Because a lot of people got upset that I had too much like programming and engineering and like applied things, so I reckon not enough maths.

BH: Correct. [dings] Point.

MP: Yes!

BH: Finally, Peter Ennals, again on Amazon.

MP: Mhm.

BH: This time it's a review of Things to Make and Do in the Fourth Dimension. Another of your books.

MP: Thank you.

BH: Peter says, my inner nerd was awoken again by this book and I'm glad it was. You do not need a blank to enjoy this book.

MP: Oh Peter. I feel like I've changed Peter's life. Um...

BH: [laughs]

MP: It's probably something like, you do not need a maths degree to enjoy this book.

BH: Point! [dings] Correct.

MP: Yes! Alright.

BH: Alright.

[gentle music box music]

BH: If you're enjoying this quiz, or just quizzes in general then you really should check out Brilliant. They're today's episode sponsor. Brilliant's a site crammed with interactive courses and problems and quizzes, designed to sort of change the way you think, to sharpen your brain for math or science or anything else really. The people who make them are really obsessed with knowledge and learning, they're always thinking about the best way to make a new course or a puzzle. Kind of opposite to the quiz I'm doing today, you could say. They've got all sorts of bells and whistles that help you keep track of how you're doing. It's not about like keeping score but it's always fun to like go on a streak or at least see how other people fared with a particular question you just tried. The big meaty courses are definitely the highlight on Brilliant. Things like number theory and logic, probability. They're all covered in depth and that's just to name a few. But I'd also just like to point out how much I love their daily challenges. A new conundrum everyday, usually with great little animations and artwork, they

often get you smiling. They always get you thinking. This week there was one about Fibonacci numbers actually. I mean the question was basically this, if you got a Fibonacci sequence starting naught, one, one, two, three, five, eight, thirteen, et cetera, we're assuming the first term is zero, which of these terms will be an even number, will it be the 17th, 18th, 19th, or 20th term? Have a think about it. Maybe even go to Brilliant, answer the question, and then look at all the discussion that comes after that. Check them out, brilliant.org/numberphile. Use the slash numberphile, that'll tell them that you came from here, it'll also get you a twenty percent discount on Brilliant's premium service. That's the extra level that unlocks everything. You can also give a Brilliant subscription to someone else as a gift if you think they might enjoy it. Again brilliant.org/numberphile.

[gentle chimes play]

BH: The next section is Festival of the Spoken Nerd, this is the show that you do with your good friends.

MP: Yep. Steve Mould, Helen Arney.

BH: Ten years you've been together on planes, in vans, this is your sister and brother from another mother in many ways.

MP: Yeah.

BH: Yeah?

MP: Yeah. We spent a long time in enclosed spaces.

BH: These are important people in your life.

MP: They are, they are.

BH: Okay. Question ten. What is Steve's birthday?

MP: [laughs] Oh that's just... [sighs and groans] Hang on. Steve's birthday.

BH: [laughs]

MP: Steve's birthday often falls while we're touring and normally when we're doing an autumn tour so his birthday if I had to guess is in September.

BH: Well that's not a... I'm looking for a bit more specific date than that but...

MP: Oh! I mean if that's already wrong... is that... I mean... I can... eighteen, 18th of September.

BH: 18th of September, incorrect. [buzzer]

MP: [tsks] Ah! 1978.

BH: 5th of October.

MP: 5th of October! That's practically September.

BH: Question eleven. What is Helen's birthday?

MP: See I knew that was gonna... [groans]

BH: [laughs]

MP: Oh goodness.

BH: By the way for the record, Steve didn't know your birthday, Helen does know your birthday.

MP: Of course she does.

BH: Because she says she has to fill out all the passport stuff and all that when you guys are touring.

MP: Exactly!

BH: [laughs]

MP: And Helen organizes the party for myself or Steve, when it's our birthdays.

BH: [laughs]

MP: If were... but when it's Helen's birthday like... a couple days out, one of us will text the other one, Steve and I going, oh! Have we done anything for Helen's birthday? No, we haven't.

BH: [laughs]

MP: Oh quick! And then we... but we always do something, we put the effort in. Um... so hers...

BH: When is it? When is Helen's birthday?

MP: It's also on tour, it's gonna be... it's October, November time, so I'm gonna guess the 27th of October.

BH: [laughs] [buzzer] 4th of November.

MP: Oh! What is it with... [sighs]

BH: [laughs]

MP: See months really just kind of fade out for me. I don't see it as an abrupt end.

BH: Do you feel close to these people? Are they friends?

MP: I... yes... well the reason we're good friends is we automate much of our lives and remembering birthdays is not a something we trust our brains to do.
[laughs]

BH: [laughs] Well then question twelve, what is Steve's middle name?

MP: [tsks] Peter.

BH: Correct. [dings]

MP: Yes!

BH: I know why you know that though.

MP: It was a joke in the show. [laughs]

BH: Yes. [laughs] 'Cause when he told me, I knew it. [laughs] Question thirteen.

MP: Oh no, don't...

BH: What is Helen's middle name?

MP: No! [groans] I don't know Helen's middle name.

BH: [laughs]

MP: [sighs] Ah [groans] Helen... Catherine Arney? No her sister's... um... is it... um... is it... also Helen Arney?

BH: No. [buzzers]

MP: Oh. What is it?

BH: Benoit. No it's Amanda.

MP: [laughs] Amanda!

BH: Yeah.

MP: Amanda.

BH: Alright, this question...

MP: Helen Amanda Arney so her name is just Haaaaaa. [laughs]

BH: [laughs] This is a question suggested by Steve.

MP: Hey, did they know my middle name?

BH: I actually didn't ask.

MP: [grumbles]

BH: Helen did know your middle name.

MP: Of course she did.

BH: I don't know your middle name, but Helen does.

MP: Oh yeah.

BH: And she didn't tell me what it was.

MP: Hm!

BH: What is your middle name?

MP: Thomas.

BH: Yeah.

MP: Yeah.

BH: Okay.

MP: Yeah.

BH: This is a question via Steve. How many more subscribers does Steve have on Youtube...

MP: Oh my goodness!

BH: ...than Matt. [laughs]

MP: [groans] He overtook me...

BH: [laughs]

MP: ...like six or twelve months ago and hasn't let me forget.

BH: [laughs]

MP: I think he's... oh he just wants to make me say it out loud. I bet he's on the order...

BH: Within... within ten K I'll take as an answer.

MP: Oh. [groans]

BH: What's the difference between ya?

MP: Eighty thousand.

BH: No. [buzzer] It's only fifty-nine.

MP: No? Really!

BH: Yeah.

MP: Well, there you go. I'm very happy to have that point. [laughs]

BH: Yeah? [laughs] Zero. Zero points. Six hundred K to five forty-one K as it stands at the time of recording.

MP: Oh, I thought he was just over six hundred. Oh there you go.

BH: Uh...

MP: Good. Good.

BH: Maybe it's rounded? Maybe you were right, but...

MP: Either he's faltering or I'm catching him, we'll find out.

BH: Alright, links in the show notes, people.

MP: That's a great question because people answering it at home can change the answer themselves.

BH: And here's one from Helen.

MP: Mhm.

BH: She wants you to name the first Edinburgh Fringe venue that you performed at as a trio presumably.

MP: As a trio?

BH: And she said, yeah, she says our, so I assume it's the Spoken Nerd.

MP: Yeah, yeah.

BH: And she says you can have a clue. Apparently you guys only did one show there.

MP: We did.

BH: And it was 2011.

MP: 2011. So we started doing shows 2010. We went up and did a one off show... 2011... oh 'cause our first regular show's 2012. And it was in a night

club...

BH: Hmm

MP: Which I think at the time was the Sin Nightclub? Or Sine. Or Sine Nightclub, depending on your personal spin on it.

BH: [laughs]

MP: [laughs]

BH: Correct! [dings] Sine...

MP: Hey!

BH: No not sine... now I'm saying it, the Sin Club. [laughs]

MP: The Sine Nightclub.

BH: She was... I think she was confident that you wouldn't get that one.

MP: Oh come on. Come on.

BH: There you go.

MP: I don't remember a solid maths named nightclub... [laughs]

BH: [laughs] Alright, the next section is the inevitable Parker Square section.

MP: Oh my [grumbles]

BH: To the nearest fifty thousand...

MP: Yeah?

BH: ...how many views has the notorious Parker Square video on Numberphile had?

MP: Oh my goodness. I mean I can try and scale it based on how many people show up wearing the t-shirts...

BH: [laughs]

MP: ...to my various... it's gonna be... it's in the ballpark, it's somewhere between half a million I reckon and one and a half million. Or has it gone over a million? Oh. I wanna say... gimme... nine hundred thousand.

BH: [buzzer] No. One point two one million.

MP: One point two one, it is over.

BH: Yeah.

MP: Well there you go.

BH: Yeah.

MP: Thanks everyone.

BH: Goes from strength to strength.

MP: [laughs] It's the video that keeps on giving.

BH: Now here we go, obviously everyone listening surely knows what the

Parker Square is, it's a three by three grid with numbers in it that are squared. But let's remove those squares. What are the non squared numbers in the Parker Square...

MP: Oh my goodness.

BH: ...from top left down to bottom right.

MP: You want them in position!

BH: So like you're reading on a page. In position. What are the numbers?

MP: Oh my goodness.

BH: In this three by three matrix.

MP: Oh! [groans]

BH: Starting at the top left.

MP: Well, I've only gotta do half of it because it's symmetric around the... middle diagonal.

BH: Right? [laughs]

MP: I want to say the middle number is thirty-seven.

BH: Okay there's one point, [dings] I'll give you a point for each one you get in the right position. Yeah.

MP: I want to say top left is one. [buzzer] What to say... oh no I didn't get a point for that. There's a forty-seven...

BH: [laughs]

MP: I think there's a... either a thirty-one or a forty-one.

BH: [laughs]

MP: [groans] Okay!

BH: You're making a Parker Square of this Parker Square.

MP: I know... well, you...

BH: [laughs]

MP: This whole quiz is a set up for you to deliver that line!

BH: [laughs]

MP: I reckon top... top right is twenty-one [buzzer], top middle is... forty-one [buzzer], bottom left is forty-seven [buzzer], I should just guess they're all one, and I woulda got it.

BH: [laughs]

MP: You didn't respond when I said one before so I'm gonna move that to being... uh... on the second one down on the left [buzzer], one I'll put one over there.

BH: Oh this is just... you're just dying here, Matt.

MP: Any of those? Any!

BH: No, the thirty-seven in the middle, I'll give you one point.

MP: That's the only one, that I don't get a second one for free?

BH: I'll give you another go from scratch. There is no one in a corner.

MP: There's no one in a corner. So is it the top... is it the second one on the top then?

BH: Yes. [dings]

MP: Okay. I'll have that one.

BH: Alright. You've got that.

MP: Okay, I'm gonna put... um... thirty-one top left.

BH: No...

MP: I'm gonna put forty-one top left.

BH: [sighs] No. [laughs]

MP: I'm gonna put forty-seven to left.

BH: [laughs]

MP: C'mon!

BH: It's twenty-nine in the top left!

MP: Twenty-nine!

BH: Yeah.

MP: Oh wow... [grumbles]... okay.

BH: You're getting two points, I'm pulling the plug on this.

MP: [laughs]

BH: [laughs]

MP: I'm gonna do it by exhaustion! [laughs]

BH: Yeah. [laughs]

MP: [laughs]

BH: Here's another Parker Square question though.

MP: Oh...

BH: What four digit number do all the rows and columns and one of the diagonals add up to?

MP: [tsks] Oh my goodness. It's something...

BH: What is that?

MP: It's something like three thousand six hundred and ninety-one... that I'm guessing.

BH: Oh that was not a bad guess but it's wrong. [buzzer]

MP: Oh, what is it?

BH: It's three thousand and fifty-one.

MP: Oh three zero five one. I had the middle bit wrong.

BH: Yeah, 'cause the final question about Parker Square is, what does that one stray diagonal add up to?

MP: Oh! It's high two hundreds isn't it... that's no... or is it low four... no it's four... thousand... [pause]

BH: Ooh?

MP: Ooh.

BH: Good start. Good start.

MP: No it is, it is, 'cause I was thinking it was like two thousand eight hundred but it's not it's like four thousand one hundred and something...

BH: Oh! [yells] You're close! [yells]

MP: [sighs]

BH: If you get the last digit! [yells]

MP: Uh... is it... a... three?

BH: No! [buzzer]

MP: Seven!

[silence]

MP: Five?

BH: I'll give you... I'll give you half a point. [dings]

MP: Seven, okay.

BH: It was seen.

MP: Yay! [laughs]

BH: Four thousand one hundred and seven.

MP: That feels... that feels incredibly on brand.

BH: Alright.

MP: You know the great thing is people will occasionally get me to draw a Parker Square on a thing and sign it...

BH: Yeah?

MP: And every time I'm like, oh let me just double check this.

BH: What do you check it on?

MP: I've just got it on my phone.

BH: Oh right? [laughs]

MP: I bring it up. Yeah. You'd think I would've memorized out of sheer repetition by now.

BH: I would've thought you'd had it tattooed by now.

MP: [laughs]

BH: [laughs] How cool would that be? If someone came up to you with a Parker Square t-shirt like to rub it in and you just pulled up your sleeve and like...

MP: And I'm like, oh yeah! Check this out. Yeah.

BH: [laughs] I'll raise ya.

MP: That's owning it. Yeah. [laughs]

BH: Alright. The next section is about the name Parker.

MP: Oh, okay.

BH: Alright? Question nineteen, who was Bonnie Parker?

MP: I don't... Bonnie Parker?

BH: Hmm.

MP: Sounds like an outlaw. Like... someone in the Wild West. I'm gonna go American Outlaw. But it's an absolute guess.

BH: You're right! [dings]

MP: Really? [laughs]

BH: But's Bonnie... but it's different. It's not from the West...

MP: Right?

BH: But American Outlaw is the most correct answer you could've given.

MP: Yes!

BH: Bonnie Parker is Bonnie from Bonnie and Clyde.

MP: Really!

BH: Yeah.

MP: Oh there ya go.

BH: I can't believe you got that wrong and yet got it right.

MP: Y'know, the important thing is I gave it a go.

BH: You did!

MP: [laughs]

BH: One point. One point.

MP: Thank you.

BH: Question twenty, the Arch Bishop of Canterbury, Matthew Parker...

MP: Correct.

BH: ...lived in which century?

MP: Oh! It was like... um... uh... 11th century. [sighs]

BH: No. [buzzer]

MP: Ugh.

BH: 16th.

MP: Ah. [laughs]

BH: Yeah. This is obviously a namesake. Matthew Parker is this someone you've studied, obviously not...

MP: Yeah.

BH: ...if you had him in the 11th century.

MP: Oh, I had him in the wrong... I couldn't remember... I thought there was some link between him and the Domesday Book.

BH: Oh.

MP: Which is why I guessed that but actually I should've known because there's a college... oh actually maybe not... there's a college named after him, I think, at... Cambridge. Cambridge or Oxford?

BH: Okay.

MP: And I've got... every so often someone will give me a book about Matthew Parker. Um...

BH: Okay.

MP: And there's a street. There's a street named Matthew Parker street in... London as well, named after... either...

BH: I think I've seen you... I think I've seen you take selfies there on numerous occasions.

MP: You know it. You know it.

BH: [laughs] For people who don't know by the way the Arch Bishop of Canterbury is like the head of the Church of England, kind of like, you know, the closest thing the Church of England has to the Pope, but... not really the Pope. He's the boss.

MP: Yeah.

BH: Question twenty-one. A mathematician named Parker helped disprove a famous Euler Conjecture relating to the mutually orthogonal Latin Squares of order four N plus two. He also had, and was known by, catchy initials. Was he... [pause] E.T. Parker, A.I. Parker...

MP: Yeah.

BH: Or O.K. Parker.

MP: [laughs] Hey... okay... oh... I haven't watched James Grime's

Numberphile video about Euler Squares yet. I'm sorry Latin Squares. Ah. [tsks]

BH: He... it's okay, this wouldn't be helping.

MP: It's not in there, okay, right, right, right.

BH: No.

MP: Um... I'm gonna say... oh... O.K. Parker, that is tempting. E.T. Parker, A.I. Parker. I'm gonna go A.I. Parker.

BH: Alright. [pause] Wrong. [buzzer]

MP: Ugh.

BH: It was E.T.

MP: E.T.

BH: Yeah. [laughs]

MP: I figured O.K. was... definitely written by you.

BH: Okay, yeah it's too good to be true.

MP: [laughs]

BH: Literally. Uh... [laughs] Question twenty-two, the Parker Solar Probe...

MP: Oh! Okay.

BH: Yeah.

MP: That's interesting.

BH: ...is name after which astrophysicist?

MP: See the reason this is particularly interesting, for everyone listening, is my wife is a solar physicist.

BH: Hmm.

MP: And so she... this is like the Venn Diagram of our household.

BH: Yeah.

MP: And it is Eugene Parker.

BH: Correct. [dings]

MP: Thank you.

BH: Eugene Newman Parker, for those of you...

MP: Oh!

BH: ...who are...

MP: All those middle name fans out there.

BH: Unbelievable timing. Because, I'm gonna put in a new question here. Question twenty-two A.

MP: Oh.

BH: And the reason is, I actually emailed your wife earlier.

MP: Oh what?

BH: For help with a question and she hadn't gotten back to me but she just emailed me back then.

MP: Oh no.

BH: With the information I needed.

MP: Lucy!

BH: [laughs] So here we go.

MP: She's like... ah okay, yep.

BH: Question twenty-two A.

MP: Mhm.

BH: What was the title... of Lucy Greene's PhD Thesis?

MP: Oh my... [groans]

BH: [laughs]

MP: I've not read it. [laughs]

BH: If it's close I'll give it to you.

MP: Okay, okay, okay. Now I can do this.

BH: If you've got four key... five key... five words.

MP: Okay, okay.

BH: I want five words correct.

MP: So... what was she doing at the beginning of career? So it's definitely gonna involve coronal mass ejections, so... um... CMEs are gonna be in the title somewhere. It's probably gonna involve in the sun's atmosphere. It's probably gonna involve magnetic structures or fields. And it's probably gonna involve reconnection. So I'm going to put them together and say...

BH: [laughs]

MP: Magnetic Reconnection and Energy Release in Coronal Mass Ejections in the Sun's Atmosphere.

BH: [laughs]

MP: [laughs]

BH: You don't get a point. [buzzer]

MP: Ah! What is it?

BH: It was called... you got three words. You got the easy one.

MP: Okay... oh.

BH: The title of her... which her thesis... which I have in front of me now is,

Aspects of the Relationship between Active Regions and Coronal Mass Ejections.

MP: Active... active regions is where all the magnetic reconnection goes... okay, no fine.

BH: You're not havin' it.

MP: Active regions. Fine.

BH: You're not havin' it.

MP: Well I may not make that record number of consecutive days after all.

BH: [laughs] I will... but we'll link to her thesis in the notes for the podcast so that'll win you some brownie points.

MP: Oh good. Good, good, please do. Please do. I'll make sure I... I'll make sure I read it before... [laughs]

BH: [laughs] Up the citations. Alright.

MP: [sighs]

BH: Okay question twenty-three, we're back in the Parker zone here. For fifteen months, an American woman named Edna Parker was the oldest person in the world.

MP: Hmm.

BH: How old was she when she died in 2008?

MP: Oh, oldest person in the world...

BH: Hmm.

MP: I don't think anyone's hit a hundred and thirty... a lot of people get to a hundred, so... by the distribution I'd say she's gonna be between a hundred and fifteen and a hundred and thirty, so I would say on the order of a hundred and twenty-three.

[pause]

BH: No. [buzzer]

MP: Ah!

BH: She was a hundred and fifteen.

MP: Hundred fifteen! Oh wow.

BH: And two hundred and twenty days.

MP: I have over estimated how old people live to.

BH: For her birthday, when she turned a hundred fifteen, they released multi-colored balloons, because Parker enjoyed watching them float into the sky.

MP: Oh.

BH: But it doesn't say whether it was a hundred and fifteen different colors or just like...

MP: Just...

BH: ...three or four...

MP: ...two.

BH: ...different colors.

MP: [laughs]

BH: Yeah.

MP: [laughs]

BH: Next. We're doing Rubik's Cube section.

MP: Okay?

BH: Alright? Question twenty-four. What was the Rubik's Cube originally named in the patent application?

MP: Oh, it was originally named something like Magic Cube but then when they couldn't get the... patent... they just trademarked the name Rubik's Cube instead. So I'm gonna go Magic Cube.

BH: Correct. [dings]

MP: Yay.

BH: Well-played. What are the six colors on the current configuration? Don't look at one if you've got one in the room, which you probably do.

MP: I am but I'm starring straight ahead out the window.

BH: [laughs]

MP: So I don't try and sneak a peak.

BH: [laughs]

MP: Um... so... I should be able to do this. White [dings] is opposite yellow [dings]. Green [dings] is opposite blue [dings]. Red [dings] is opposite orange [dings].

BH: You got it. I'll give you six points for that, 'cause I feel like boosting your score a bit.

MP: Oh! Thanks. That's... bordering on patronizing. I'll take it. [laughs]

BH: A point for each color.

MP: Oh good, oh good. Oh yeah.

BH: The Rubik's Cube is famously three by three by three.

MP: Mhm.

BH: The variant known as Professor's Cube is of what dimensions?

MP: Oh the Professor Cube is... oh... it's in the teens... it's either eleven or thirteen or fifteen or seventeen or nineteen... I think it's an odd one in that range... Professor ugh... I'm gonna guess... oh... it's [groans] I'm torn between eleven and thirteen... I'm gonna go... it's... eleven.

BH: [buzzer] Five by five by five.

MP: What!

BH: That's what Wikipedia says.

MP: Professor. Huh. Wow, I have... I have overestimated... the academic qualifications for different sized cubes.

BH: [laughs] Alright. The next section is sport because... I love sport even if you don't.

MP: [groans]

BH: But I've tried to number it up a bit for you.

MP: Oh thank you! I appreciate that.

BH: Alright? Why was it curious that the fiftieth Super Bowl, held in 2015, was called Super Bowl Fifty?

MP: Oh! I know this. I know this!

BH: Yeah?

MP: It's because previously they had always used Roman numerals... to do the Super Bowl.

BH: Yeah.

MP: But they didn't... they didn't do that. They didn't want it call it Super Bowl... well it'd be L. They called it Super Bowl Fifty using traditional digits.

BH: Correct. [dings]

MP: They were in Hindu-Arabic instead of Roman.

BH: Well done.

MP: I remember that. That was exciting.

BH: Now this... these bonus points are only for Matt. People playing at home, especially Americans, aren't eligible for these bonus points.

MP: Oh... oh my goodness.

BH: [laughs] Five bonus points if you can tell me the teams that played in the game.

MP: Oh.

BH: A hundred bonus points if you could tell me the score. [laughs]

MP: Oh my goodness. Okay. Okay.

BH: [laughs]

MP: Okay, okay. That's worth a stab in the dark.

BH: Alright.

MP: I bet it was the Seattle Seahawks...

BH: Hmm.

MP: ...versus the New England... Patriots.

BH: Hmm?

MP: And, I bet the score... was integers.

BH: [laughs]

MP: [laughs] Does that... can I win like... can I get accuracy through ambiguity.

BH: You get nothing there. [buzzers]

MP: Oh.

BH: Neither of the teams are correct...

MP: [groans]

BH: ...and I'm not havin' your funny buggers with the scores.

MP: Fair enough.

BH: It was the Broncos and the Panthers, twenty-four, ten.

MP: Broncos and Panthers, hmm.

BH: [laughs] One bonus point though, Matt, if you can tell me how many points an American football team gets for scoring a touchdown.

MP: The touchdown.

BH: Hmm.

MP: Ooh! 'Cause they get the conversion afterwards.

BH: Hmm.

MP: [sighs]

BH: Just the touchdown.

MP: So it's not gonna be six 'cause that's Aussie rules. And I feel like it was the same I would know that. Oh but then... the score goes up... often like [groans] I'm gonna... oh goodness. I'm gonna guess seven. [buzzer]

BH: It was six.

MP: It was six!

BH: Yep.

MP: I can't believe I talked myself out.

BH: Yeah.

MP: I was like six, no wait that's Aussie rules.

BH: Yeah.

MP: Unbelievable.

BH: Alright. Now two points for this question.

MP: Mhm.

BH: One I think is easy, the other one... I also think is easy.

MP: I'll be the judge of that.

BH: Less easy. What two double digit numbers is basketballer Michael Jordan most famous for wearing?

MP: Oh... well... 'cause originally he either wanted forty-five or his... idol had forty-five and when he couldn't get that early on he took half that, twenty-three. But then he briefly... well he wore it briefly when he came back. After his first of two... unsuccessful retirements, he wore forty-five for a bit. So twenty-three and forty-five.

BH: Two points. [dings]

MP: Thank you. NBA is like the one sporting area where I can...

BH: Oh yeah!

MP: ...actually answer.

BH: You used to play basketball, didn't you? I remember.

MP: Yeah I used to play basketball and I loved the NBA.

BH: Yeah.

MP: So that...

BH: Have you been watching the Last Dance?

MP: I have. I have.

BH: On Netflix?

MP: I've seen it all. It's great. It's really good. Uh... fun side fact I'd learnt, so in.. NBA obvious you can have any numbers up... I think you can have double zero right up to like ninety-nine...

BH: Hmm.

MP: But in college ball in the States, you're not allowed to have any digits in any of your team numbers greater than five. So someone can wear...

BH: Ohh.

MP: ...like shirt fifty-four...

BH: Yeah?

MP: But you can't wear shirt sixteen. 'Cause one of the digits is greater than five.

BH: Okay.

MP: And so, everything you have to be able to sign with a single hand for each digit.

BH: Why is that?

MP: Just so that the ump... the refs can... um...

BH: Oh, make a signals.

MP: Sign the number when... they yeah.

BH: Okay. So that fouls on number twenty-three and you can hold up a two and a three.

MP: Yeah, and you go two and three, yeah.

BH: I do have an extra bonus point question.

MP: Oh?

BH: In a game in 1990...

MP: Mhm?

BH: Michael Jordan's twenty-three... uh... top was stolen.

MP: Oh?

BH: So he had to wear a different number and in that game he scored forty-nine points, which is the Chicago Bulls record for a player wearing that number. He only wore it once.

MP: What was the number.

BH: What was the number he wore in that game. It was nameless, there was no name obviously on the top.

MP: It was like just a spare top.

BH: It was a spare top with a number on it.

MP: Someone stole... I didn't know that happened. Well my guess is probably not right but I was gonna guess thirteen.

BH: Hmm?

MP: And that's only because... also playing for the Bulls in the second three-peat was a player called Luke Longley, who was their...

BH: Oh yeah.

MP: ...kind of off the bench center.

BH: Perth lad.

MP: Who came from Perth, WA.

BH: Yeah.

MP: And so the entire time we've been watching the Last Dance, every time Luke Longley's on screen...

BH: [laughs]

MP: ...every time, I bump Lucy and I'm like, that guy's from Perth.

BH: [laughs]

MP: Like without fail.

BH: [laughs]

MP: And she has tolerated that so, good on her.

BH: [laughs] Alright. You were close.

MP: Oh. Close.

BH: My clue was gonna be you could derive this number from the... uh... the other two numbers.

MP: Oh what he wore like... thirty-two or something.

BH: Twelve.

MP: Twelve!

BH: The difference. The difference.

MP: Oh the difference!

BH: Yeah.

MP: Huh.

BH: Actually no, that's not the difference.

MP: That's not the difference. 'Cause he picked half, so twenty-two would be the difference, yeah.

BH: So my clue would have been really pointless.

MP: Well that's about borderline... well I was gonna say bordering on misleading but that's...[laughs]

BH: Glad I didn't use it. [laughs]

MP: Take that out of the edit.

BH: No, no, I'll leave it in.

MP: Oh, oh that's very good of you.

BH: Okay, cricket. I know you're not as into cricket as me.

MP: Oh...

BH: But, I thought this was interesting anyway, so I'll give it to you. What is the lowest score ever scored by an individual batsman in a game of test cricket?

MP: Oh that's really interesting.

BH: So if yeah, I thought you'd find that interesting. So for people who don't know in cricket, players go out and score individual scores that get added on to the total team score and to give you some idea of scale, if you score fifty runs in an individual innings, the crowd will applaud and you raise your bat.

MP: Yeah.

BH: If you score a hundred runs in an individual innings...

MP: Oh, the old century.

BH: A century, that's a really big deal. You get a standing ovation and... and you can go beyond that... so... I think the highest score ever in a game of test cricket by an individual is four hundred.

MP: Wow!

BH: Yeah by Brian Lara. But what is... but obviously the higher scores are very very rare. Uh... what is the lowest score that has never been scored by an individual batsman, as in that's where he stopped. Obviously batman have gone beyond this score.

MP: Yes, but that's the lowest unique...

BH: Yep.

MP: ...score. Okay... so...

BH: Yeah.

MP: This is actually, this a thing called the Coupon Collector's Problem.

BH: Right?

MP: Where... you've gotta collect like every possible value but you get them assigned at random.

BH: Right.

MP: And so this a related one, of what's the smallest unique one that's come in.

BH: Yeah.

MP: Oh it's gonna be... I would be amazed... is this just like in test cricket or this is like...

BH: Just test cricket.

MP: Just test cricket.

BH: Just test cricket which is this highest elite form of the game.

MP: Well, obviously. None of this one dayer rubbish, so... um...

BH: And I hope this is still correct, I tried to... I tried to ascertain how recently this was correct and...

MP: I'm... gonna guess it's between a hundred and a hundred and fifty some... or maybe it's higher than that. I'm gonna guess a hundred and twenty-seven. I feel like I'm low balling it.

BH: You're definitely... you're low balling it. [buzzer] It's two hundred and twenty-nine.

MP: Wow. I was off by a hundred and two.

BH: No individual has ever ended their innings on two hundred and twenty-nine. That's the lowest.

MP: Huh.

BH: Here's a bonus point question.

MP: Mhm?

BH: What's the most common score?

MP: Oh wow. Uh. Thirty-seven.

BH: No. [buzzer] You should've thought more about that. It's actually, you could kind of like logic your way to it.

MP: What it's like... it's fifty or a hundred 'cause they get pulled off once they've achieved a milestone?

BH: [laughs] Well that would be...

MP: Or is it...

BH: That would be quite a way to bring up the milestone.

MP: Or is it zero because everyone just gets bowled out and...

BH: That would have been correct.

MP: Ahh! Zero!

BH: Zero.

MP: I should've...

BH: Zero.

MP: You're right, you're absolutely right.

BH: A duck. How many have times have teams from Perth won the AFL premiership? This is the highest... uh... honor that can be won in Australian football in the national competition.

MP: Oh my goodness. How many times.

BH: It's like the NFL of Australia. How many times have teams from Perth won the crown?

MP: Won the final.

BH: Yeah.

MP: Okay so the Dockers... who I nominally support...

BH: This is Fremantle.

MP: ...have made it to the final... Freo Dockers, yep, they've made it to the final.

BH: Yeah.

MP: 'Cause I had to get up at some outrageous hour of the morning to go into London to a pub to watch it.

BH: [laughs] Yep.

MP: Um.

BH: Watch them lose.

MP: Watch the [groans] oh god... it was just... wait was that against Port Power? Who was that against?

BH: Was it? I don't know.

MP: I don't think it was.

BH: From Adelaide? I don't think it was.

MP: Yeah, I don't think it was. So anyway, so... this just shows you how much I know about it and how closely I do follow the Dockers.

BH: [laughs]

MP: So however... the Eagles, the other team from Perth...

BH: Yeah.

MP: Have won.

BH: The West Coast Eagles. The West Coast Eagles.

MP: That's them, I think they won their first one in the early Nineties. Probably around '91, '92ish, and I reckon...

BH: Yeah.

MP: ...they've won it a handful of times. So I think probably... it's probably gonna be between three and seven. I'm... going to guess four.

[pause]

BH: Correct! [dings]

MP: Really!

BH: Yes!

MP: I knew if I kept guessing at random I would get one eventually. [laughs]

BH: [laughs] Here's the final section. This the final section.

MP: Yeah?

BH: These are Australian questions, but with bit of a Matt twist.

MP: Okay.

BH: But they all center around Australia.

MP: I'm intrigued!

BH: Question thirty-three. Adelaide's Rundle Mall, which is famed for it's stainless steel sculpture...

MP: Yeah.

BH: The Mall's Balls.

MP: Oh I was hoping that was the question! 'Cause I was like, it's gonna be the Mall's Balls! No.

BH: I know you like the Mall's Balls. Famous stainless steel sculpture in the middle of Rundle Mall. My question is, what is the sculpture's official name?

MP: Oh.

BH: It's official name. It's nicknamed the Mall's Balls, and I think there's a chance you'll just guess it, which is why I'm asking it.

MP: It's probably... like... um... Spherical or something like that. Um... I'm gonna go Spherical. That was my first instinct.

BH: I'm gonna give you half a point. [dings]

MP: What is it like Spheres?

BH: The Spheres.

MP: Ugh.

BH: The Spheres.

MP: The Spheres.

BH: But Spherical I'll give you half.

MP: Thank you.

BH: Alright next question, thirty-four. What are the highest and lowest points in Austrlia? And what are there altitudes to within... a hundred meters.

MP: Oh wow. So... the highest is... I believe Mt. Kosciuszko [dings]

BH: Hmm?

MP: And the...

BH: So you get one point for the name.

MP: And the lowest is gonna be... how low below sea level do I reckon... I

mean what's low, is it like a salt plain in WA or something... is that the lowest? Or is it somewhere in the middle which is super low. Or is it just Adelaide.

BH: [laughs]

MP: [laughs] I'm gonna... [sighs] ah.

BH: You know I'm not gonna give you a Western Australia place over a South Australian place but yeah. [laughs]

MP: Good point, good point. Um... I don't... I'm gonna... it's gonna be somewhere inland and I'm just gonna be guessing at random... I'm gonna go Kalgoorlie.

BH: I thought you might know that.

MP: No.

BH: I thought you might know it.

MP: No.

BH: It's not as famous as I thought.

MP: Well can I still guess. I bet it is on the order of like... a hundred meters below sea level...

BH: Right?

MP: And I bet Kosciuszko... I don't even know how tall... wait... aircraft fly at about thirty, forty-thousand... ten thousand... it's it like fifteen hundred meters above sea level, Kosciuszko? [buzzer] For guess.

BH: So the lowest point is Lake Eyre.

MP: Oh!

BH: And it's minus fifteen meters.

MP: Oh.

BH: Which because of the hundred meters I gave you means I do have to give you the point. [dings]

MP: Hey! [laughs]

BH: One point there.

MP: Excellent.

BH: Mt. Kosciuszko, correct, but your altitude was off.

MP: Oh.

BH: It's two thousand two hundred and twenty-eight meters.

MP: Oh wow, that's more than I expected.

BH: And I will give you an extra bonus point...

MP: Mhm?

BH: ...if you can spell Kosciuszko.

MP: [groans] I'd have a better chance Eyre.

BH: [laughs]

MP: Uh... C O... Kosci... os... I've just written in front of me C O S S I O S C
O. [buzzer]

BH: Wow you're a long way off there.

MP: Oh what is it.

BH: It starts with a K.

MP: [laughs]

BH: [laughs]

MP: [laughs]

BH: [laughs]

MP: [laughs]

BH: It's K O S C I U S Zed K O.

MP: Oh my goodness.

BH: Who was Kosciuszko? I think he must've been Polish or something, he was an explorer, wasn't he?

MP: He must've been.

BH: Yeah.

MP: There's an urban legend, and I've not fact checked, I think I did try to fact check this but I couldn't confirm it. That they had named a mountain, Mt. Kosciuszko 'cause it was the tallest one in the Australia, but then one day they realized they got it wrong and the one next to it was actually taller, and instead of redoing all the, you know, text books and everything, they just swapped the names around. So that Kosciuszko stayed the tallest mountain.

BH: Oh so... it wasn't supposed to be the tallest mountain in Australia but...

MP: Well the people and everyone thought Kosciuszko was the tallest and turns out it wasn't so they just renamed the taller one Kosciuszko.

BH: Oh, right. Okay.

MP: [laughs]

BH: They swapped the names, right.

MP: Yeah, exactly, but I've not been able to verify that, so I... I'm afraid it might be an urban legend but if anyone can confirm that let me know.

BH: Alright, well... final question of the quiz, Matt. Question thirty-five.

MP: I'm ready.

BH: How many Australians have won the Fields Medal?

MP: How many Australians have won the Fields Medal? Well... Terry Tao has won the Fields Medal.

BH: Yes.

MP: I feel like... there could be up to one Australian who's won it and I've not remembered that. So I reckon the answer's one, two, or three. But... oh... I'm gonna say, two, just to give myself... the room to... to factor in the unknown unknown. Two.

BH: Correct. [doings]

MP: [gasps] Yes! Error bars for the win!

BH: Alright.

MP: Who was the other one?

BH: The other, which... I thought you'd might get because they're West Australian.

MP: Really?

BH: Perth.

MP: No.

BH: Akshay Venkatesh.

MP: Huh.

BH: Who was born in India but at the age of two moved to Austrlia.

MP: Oh he went to UWA... yeah.

BH: And he was Australian National and went to University West Australia.

MP: Yeah! That is ringing a bell.

BH: Yeah.

MP: There you go, huh.

BH: Yeah. Better add up our score here, eh?

MP: Now I stopped paying... I stopped writing it down a while ago so I'm hoping you've got a total there for me.

BH: I'm gonna total it.

MP: It's just as well.

BH: Here we go. Let me do it live. One... plus four. [four dings] Five... six... [paper shuffling] [more dings] seven, eight. [papers shuffle and dings as Brady calculates the final score] Nine... ten... eleven...

MP: If people... at home just adding up their own scores as well... that'd be great, and uh... feel free to tweet them at me.

BH: Yeah... eleven and a half. [more dings] Twelve and a half.

MP: This is like a real role reversal for us, Brady.

BH: [dings and papers shuffle] Nineteen and a half. Yeah? Twenty and half.

MP: I'm the one waiting around while you'll doing a whole bunch of...
[laughs]

BH: [laughs]

MP: ...tedious calculations. [laughs]

BH: [dings] twenty-two and a half. Yeah and you're firing, talking at me while I'm trying to concentrate, it is a role reversal.

MP: Yeah! Yeah! How's it feel! [laughs]

BH: Twenty-three and a half [laughs].

MP: Yeah explain what you're doing while you're doing it! [laughs]

BH: [laughs] Twenty-four. Twenty-five. Twenty-six. Twenty-seven. [dings] Oh what's the page doing there. Uh... [dings as Brady counts out score] Twenty-eight. Thirty. Thirty-one. I think it's Thirty-one. If it's something different I'll update people another time.

MP: And how many, how many questions were there?

BH: Um... there were thirty-five but like there were different points. Lots of questions had multiple points so that's...

MP: Oh yeah, but... I mean... that's on average, you know, nearly a point per question, yeah.

BH: Yeah. I think you did alright. I think you did alright. How did you feel about it?

MP: I enjoyed it.

BH: You enjoyed it?

MP: I feel like by not having memorized the Parker Square I just made that slightly worse for myself, but other than that I had a fantastic time. [laughs]

BH: Yeah. Like what will be your takeaway? Is there anything you're gonna takeaway from this? Things you feel like you need to learn more about or things you sort of feel like are weaknesses in your... in your knowledge? Besides the names and birthdates of your best mates?

MP: A lot of areas for improvement, yes. Um...

BH: Yeah?

MP: Obviously I've gotta read my wife's thesis. That seems to be very important.

BH: Yeah? [laughs]

MP: And my sport knowledge is both... uh... narrow and shallow so that's good to know.

BH: Oh yeah. The sport was the section that you did better in than I expected.

MP: Oh okay. Okay.

BH: 'Cause you got the... you got the West Coast Eagles four premierships.

MP: Yep.

BH: You got the Michael Jordan stuff. You got the Super Bowl. The sport was your strongest section.

MP: Oh wow.

BH: I think I made it too easy.

MP: I think you underestimated my... ability to know or at least estimate ridiculous bits of sporting knowledge.

BH: Yeah. Well, thank you for playing.

MP: My pleasure. Are you subjecting other people to this?

BH: [pause] No. No. This was just...

MP: Oh it's just for me? Oh wow I feel...

BH: It was a Parker Quiz! It was just for you.

MP: I feel special.

BH: Well, how am I gonna do other... this quiz with other people like I can't ask them what like you know...

MP: Well you could...

BH: Steve Mould's middle name is.

MP: Well you could craft a whole new quiz for someone else, I dunno.

BH: Well yeah I could do a whole new quiz, yeah. I might do that. But I'm not gonna give other people the Parker Quiz.

MP: No, no, obviously, are you gonna give the Grime Quiz or something that's what I was [laughs]

BH: Oh alright, yeah. I'm not gonna ask James Grime what Lucy Greene's...

MP: [laughs]

BH: ...PhD thesis was called.

MP: He's probably do better than me at the Parker Quiz. [laughs]

BH: [laughs] Matt did not know this quiz was coming, people.

MP: No.

BH: I completely sprung this on him, which...

MP: Blind.

BH: ...felt... which I felt really bad about when he told me he'd done five quizzes in one weekend.

MP: [laughs]

BH: [laughs]

MP: Yep! Clearly practice does not make perfect.

BH: Yeah, you didn't help me with that intro there where you just started talking about how much...

MP: How much I hate quizzes! [laughs]

BH: ...you hate doing quizzes. [laughs]

MP: Yeah that's probably not the lead in you were expecting.

BH: Matt, enjoy the rest of lockdown.

MP: Yes.

BH: Hopefully we'll talk... we might do something like this again sometime or...

MP: We should, we should.

BH: ...do a video over Zoom sometime or...

MP: We keep saying we should do more remotely stuff. Yeah.

BH: ...you know... yeah. We have been talking about doing a remote video but we just haven't found the time yet.

MP: One day, one day. Thank you for keeping... keeping me entertained for an afternoon. This has been good fun.

BH: That was alright, it was very good and there'll be lots of links in the notes to lots of the stuff we spoke about, you know, Matt's books and shows and Lucy's PhD.

MP: [laughs] All the important things that have come out of this household.

BH: All the important... and most importantly Parker Square t-shirts.

MP: Obvious... Obs.

BH: [laughs]

[gentle synth music fades in]

BH: That's all for today. Thanks again to Brilliant for making this episode possible. [music continues] [Brilliant.org/numberphile](https://brilliant.org/numberphile) to have a look. Also thanks to MSRI for its ongoing support of Numberphile and most of all thanks to Matt for being on the show. He's StandupMaths on various platforms and there are links in the description to find him. I'm Brady Haran and we'll be back again soon with another podcast.

[music fades out]