

PROOF

HAL: You still here. *(CATHERINE is surprised. She doesn't speak.)* I saw Claire leaving out front. I wasn't sure if you –*(He holds up the notebook.)* This fucking thing . . . checks out.

I have been over it, *twice*, with two different sets of guys, Old geeks *and* young geeks. It is *weird*. I don't know where the techniques came from. Some of the moves are very hard to follow. But we can't find anything wrong with it! There might be something wrong with it but we can't find it. I have not slept. *(He catches his breath.)* It works. I thought you might want to know.

CATHERINE: I already knew.

*(Beat.)*

HAL: I had to swear these guys to secrecy. They were jumping out of their skins. See, one e-mail and it's all over. I threatened them. I think we're safe, they're physical cowards. *(Beat.)* I had to see you.

CATHERINE: I'm leaving.

HAL: I know. Just wait for a minute, please?

CATHERINE: What do you want? You have the book. She told me you came by for it and she gave it to you. You can do whatever you want with it. Publish it.

HAL: Catherine.

CATHERINE: Get Claire's permission and publish it. She doesn't care. She doesn't know anything about it anyway.

HAL: I don't want Claire's permission.

CATHERINE: You want mine? Publish. Go for it. Have a press conference. Tell the world what my father discovered.

HAL: I don't want to.

CATHERINE: Or fuck my father, pass it off as your own work. Who cares? Write your own ticket to any math department in the country.

HAL: I don't think your father wrote it.

*(Beat.)*

CATHERINE: You thought so last week.

HAL: That was last week. I spent this week reading the proof. I think I understand it, more or less. It uses a lot of newer mathematical techniques, things that were developed in the last decade. Elliptical curves. Modular forms. I think I learned more mathematics this week than I did in four years of grad school.

CATHERINE: So?

HAL: So the proof is very . . . hip.

CATHERINE: Get some sleep, Hal.

HAL: What was your father doing the last ten years? He wasn't well, was he?

CATHERINE: Are you done?

HAL: I don't think he would have been able to master those new techniques.

CATHERINE: But he was a genius.

HAL: But he was nuts.

CATHERINE: So he read about them later.

HAL: Maybe. The books he would have need are upstairs.

*(Beat.)*

Your dad dated everything. Even his most incoherent entries he dated. There are no dates in this.

CATHERINE: The handwriting—

HAL: --looks like your dad's. Parents and children sometimes have similar handwriting, especially if they've spent a lot of time together.

*(Beat.)*

CATHERINE: Interesting theory.

HAL: I like it.

CATHERINE: I like it too. It's what I told you last week.

HAL: I know.

CATHERINE: You blew it.

HAL: I—

CATHERINE: It's too bad, the rest of it was really good. All of it: "I loved your dad." "I always liked you." "I'd like to spend every minute with you . . ." It's killer stuff. You got laid *and* you got the notebook! You're a genius!

HAL: You're giving me way to much credit. *(Beat.)* I don't expect you to be happy with me. I just wanted . . . I don't know. I was hoping to discuss some of this with you before you left. Purely professional. I don't expect anything else.

CATHERINE: Forget it.

HAL: I mean I have questions. Working on this must have been amazing. I'd love to hear you talk about some of it.

CATHERINE: No.

HAL: You'll have to deal with it eventually, you know. You can't ignore it, you'll have to get it published. You'll have to talk to someone.

Take it, at least. Then I'll go. Here.

CATHERINE: I don't want it.

HAL: Come on, Catherine. I'm trying to correct things.

CATHERINE: You *can't*. Do you hear me?

You think you've figured something out? You run over here so pleased with yourself because you changed your mind. Now you're certain. You're so . . . *sloppy*. You don't know anything. The book, the math, the dates, the writing, all that stuff you decided with your buddies, it's just evidence. It doesn't finish the job. It doesn't prove anything.

HAL: Okay, what would?

CATHERINE: *NOTHING*.

You should have trusted me.

*(Beat.)*

HAL: I know. *(Beat. CATHERINE gathers her things.)* So Claire sold the house?

CATHERINE: Yes.

HAL: Stay in Chicago. You're an adult.

CATHERINE: She wants me in New York. She wants to look after me.

HAL: Do you need looking after?

CATHERINE: She thinks I do.

HAL: You looked after your dad for five years.

CATHERINE: So maybe it's my turn.

I kick and scream, but I don't know. Being taken care of, it doesn't sound so bad. I'm tired.

And the house is a wreck, let's face it. It's my dad's house . . .

*(Beat.)*

HAL: Nice house.

CATHERINE: It's old.

HAL: I guess.

CATHERINE: It's drafty as hell. The winters are rough.

HAL: That's just Chicago.

CATHERINE: Either it's freezing inside, or the steams on full blast and you're stifling.

HAL: I don't mind cold weather. Keeps you alert.

CATHERINE: Wait a few years.

HAL: I have lived here all my life.

CATHERINE: Yeah?

HAL: Sure. Just like you.

CATHERINE: Still. I don't think I should spend another winter here.

*(Beat.)*

HAL: There is nothing wrong with you.

CATHERINE: I think I'm like my dad.

HAL: I think you are too.

CATHERINE: I'm . . . *afraid* I'm like my dad.

HAL: You're not him.

CATHERINE: Maybe I will be.

HAL: Maybe. Maybe you'll be better.

*(Pause. HAL hands her the book. This time CATHERINE takes it. She sits. She looks down at her book, runs her fingers over the cover.)*

CATHERINE: It didn't feel "amazing" or—what word did you use?

HAL: Yeah, amazing.

CATHERINE: Yeah. It was just connecting the dots.

Some nights I could connect three or four. Some nights they'd be really far apart, I'd have no idea how to get to the next one, if there was a next one.

HAL: He really never knew?

CATHERINE: No. I worked after midnight. He was usually in bed.

HAL: Every night?

CATHERINE: No. When I got stuck I watched TV. Sometimes if he couldn't sleep he'd come downstairs, sit with me. We'd talk. Not about math, he couldn't. About the movie we were watching. I'd explain the stories.

Or about fixing the heat. Decided we didn't want to. We liked the radiators even though they clanked in the middle of the night, made the air dry.

Or we'd plan breakfast, talk about what we were gonna eat together in the morning.

Those nights were usually pretty good.

I know . . . it works . . . But all I can see are the compromises, the approximations, places where it's stitched together. It's lumpy. Dad's stuff was way more elegant. When he was young.

*(Beat.)*

HAL: Talk me through it? Whatever's bothering you. Maybe you'll improve it.

CATHERINE: I don't know. . .

HAL: Pick anything. Give it a shot? Maybe you'll discover something elegant.

*(A moment. HAL sits next to CATHERINE. Eventually she opens up the book, turns the pages slowly, finding a section. She looks at him.)*

CATHERINE: Here.

*(She begins to speak.)*

