"IF"

A Play in Two Acts Showing the Importance of Mathematics

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Ardmore, Pennsylvania

Act I

Alice, a high school student, sits bent over a table studying. The room is a typical modern living room.

Alice: And cosine squared plus sec $2x - \frac{3}{4}$ the tangent over the cotangent times the cosecant equals 435.27. Now this comes to (consults book) .00125. Goodness, how I hate logs. (Works silently for a bit.) $\frac{13}{17}$ of 49! Why can't they give us even numbers? And do you add or subtract? (Walks across room and looks at notebook, which is on the telephone stand.) Goodness! You divide. And here's a mistake. That makes this five and this (erasing) three and this two. At last! (Again consults book.) What? It isn't right? I've worked two *hours* on it, and now it isn't right. (She stamps her foot, and throws the book across the room.)

A quietly dressed lady enters, and stands looking on.

Alice (finally noticing her): Why . . . hello! Who are you?

Lady: I'm your fairy godmother, my dear. I'm rather in a hurry, but I can grant you one wish before I go.

Alice: I can have anything I want? (Her eye falls on the mathematics book.)

Lady: Anything at all.

Alice: Then I want all math to disappear from the earth.

Lady: You're quite sure that's what you want?

Alice: Yes!

Lady: Very well. Your wish is granted. Good afternoon. (Disappears.)

Alice: Oh, how wonderful! (Tears up paper she has been working on.) Pensively: No more mathematics . . . just

think! Great! She picks up a list and goes to telephone placed on the other side of the stage.

Alice: I must call up the grocer and get these things for supper. Hello? I want Ardmore . . . give me Ardmore. (Aside.) Why, there are no numbers! How disconcerting! (To the phone.) Whom do I want? . . . you may remember? Why, I'd like the grocery—Smith's grocery, please. Yes. I want the one at no.—the one at no.— . . . the one on Elm avenue. (Looks at watch, then shakes it.) And, operator, could you give me the correct time, please? My watch seems to have stopped. What? No time? (Aside.) I guess that's right. Imagine having no time! Hello? Is this Mr. Smith? Will you please send this order to Mr. Jones' house at no. . . . Mr. Jones' house on Maple Avenue, please? Yes, right away. What! What will I pay you with? Why, Mr. Smith! I'm sure father has always been very prompt about paying your bills at the end of the month! No money? Why . . . why . . . I . . . That *is* so. But I think you can trust us. We've been customers of yours for a long time . . . You will? Thank you. Perhaps at the end of a couple of weeks you can go down to father's store and pick out a piece of furniture to square the bill. Yes? Well, I want bread, some potatoes, some beans, some cans of soup—vegetable, tomato, and consomme, and . . . how many? Why, I really couldn't tell you. There are no numbers . . . and I want some sugar—I guess you'll just have to send a bagful. Then I want some bacon, a few eggs—not very many, please, and quite a lot of those chocolate cakes. No, nothing else. Yes. Thank you.

Sits at phone, thinking, as curtain falls. Shakes watch, vigorously, once or twice.

Act II

In the same room, the next day, a group of boys and girls are gathered.

Alice: Was that the bell? (Goes to door, and brings back a boy and girl—general cries of Hello, and Well, look what's here, etc.) Well, I *never* had such a day before! I had to walk to school—there weren't any trolleys, and I'm

sure that I was late . . . but I may have been early, for all anybody knows. And of course there weren't any classes; no time, you know. Bells rang, but how were we 'sposed to know which class it was? Personally, I spent all morning in mathematics, because I knew there wouldn't be any work. I don't know anybody who went to English, do you?

Bob: I did. The mathematics room was so crowded I couldn't get in.

Alice: Well, I bet you were lonesome! Then I was late for lunch, and most everything was gone. I was so bored doing nothing all morning I went to Physics class in the afternoon—at least I suppose it was afternoon—it was after lunch. Well, I never heard so much guessing in my life! They guessed this was so, and "'sposed" that was true. They couldn't prove a thing!

John: Huh! That's nothing! You should have been in Chemistry. We hardly could do anything. There weren't any formulas, or any rules, or any more theories. We tried some experiments, and something happened, but we couldn't figure out what it was. Something combined with something, but it might have been any of several different things.

Emma: Well, what about art, and music? I went to a concert last night, and the conductor couldn't keep time—it was amusing to watch the poor man, and the harmony was *rare!* He'd go like this (slow wave of the hand) and then like this (quick wave). And the instruments were without dimensions, and such funny things you never saw—nor heard, either. And think of the futuristic art—it depends entirely upon angles and curves—why, there won't be any art, except maybe color.

Lewis: There isn't even that. They have to mix colors in proportion.

Emma: Why didn't I think of that? And dressmakers are losing their jobs, too. They can't get patterns, nor make correct measurements.

James: Well, my father says he doesn't know what he's going to do. You know, he's one of the engineers on that big bridge, and he says all building has stopped everywhere, absolutely; tunnels, bridges, railroads, buildings . . . they

can't do a thing without a lot of figuring. Well, that's thrown an awful lot of people out of work—builders, makers of building material, and people who depended on them to sell things to shopkeepers. Father says he doesn't know what's going to happen. Everything's tottering. I guess our whole civilization is based on mathematics.

Susan: My father's a manufacturer, and he's had to shut down his whole factory. He makes iron, and he says it's no use making a thing unless you have the formula to make it by. And he not only has no means of knowing how much of anything to use but he doesn't have any accounts, nor statistics, nor anything. He couldn't pay the men, even. But my brother's even more worried than that.

Alice: The one that's going to get married?

Susan: Yes. His fianceé was going to make the curtains for their new home, but now she can't, because she can't measure the amount of goods. They'll just have to send over batches of curtains and shades from the store until they find some that fit. And he can't buy his rugs, and . . .

Emma: That brother of yours had better hurry up and buy his linoleum, too, because they can't make any more without geometric designs. He won't be able to get wall-paper, either.

Louise: My father's worried, too. He had some stock in a mine, and now, of course, Wall Street's stopped absolutely—it depends entirely on calculation—and he doesn't know what's going to happen to the stock. The mine's closed; it can't run any longer—might cave in any minute, and it couldn't transport the coal if it was running—railroads need time, and accurate recordings of position, and all sorts of mathematics. Well, no one wants the stock—it's no good to anybody. Just think of all the money lost forever, tied up in stocks and bonds!

John: Well, you can have the money. It's nothing but dirty pieces of paper and silver, now. I'd rather have a horse. The farmers are lucky—they still have something—their fields, and crops.

Lewis: Huh—do you think so? They're not so well off, either; how are they to know when to plant things? The calendar relied upon some very intricate mathematics; they may plant things too late, now, or too early, and get

caught by the frost either way. And all the new farm machinery's not so much good any more. It'll run until it needs repairs, and then there won't be any new parts to replace old ones with. Everything's topsy-turvy! I used to hate mathematics, myself, but I certainly wish it were back. Whatever could have happened to it?

(Alice blushes, but no one notices it.)

Louise: No one seems to know. All the mathematics just disappeared, all at once, and that's all anybody knows about it. I've got to go. My sister is due back from Europe, and we don't know what's happened to her—ships can't steer at all without mathematics. I hope there's some news. . . . Well, goodbye, everybody. (Leaves.)

Alice: Would you care to play cards?

Susan: How can we? We can't count. We don't even have any amusements left. I've got to go. (Visitors all drift out casually—giving the usual excuses—dinner, etc.)

Alice is left; she goes slowly across the room, finally sitting down with her head in her hands. The fairy godmother appears.

Lady: Good afternoon, my dear. I was in a hurry yesterday, so I came back now to give you another wish you may have. What do you want?

Alice (slowly): Oh dear! I guess I'll have to wish mathematics back again.

Curtain.

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