

POINT-COLLEGE.

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A Mathematical-Collegiate farce concerning Analytics College in which the student body is composed of animated points.

CAST OF CHARACTERS:

(0,0)	a freshman	
(∞)	a junior, advisor to (0,0)	
(1,5)	}		
(a,b)			
(-4, -9)			
(-4, -8)			
(-1, -3), president	}	members of the sorority: $3\alpha - \beta$
(-2, -6)			
(-3, -9)			
(-4, -12)			
(2, -2), president	}	members of the sorority: $\alpha^2 + 2\beta$
(3, -9/2)			
(-2, -2)			
(-1, -1/2)			
(1, -1/2)			

SCENE 1:

The plane of Analytics College. A large cardboard plane, marked as graph paper forms the background.

[Enter (0,0) carrying a suitcase. She puts the suitcase down and looks about.]

(0,0): *(sentimentally.)* So this is college at last! Just as I hoped it would be. I wonder what that tall building is on the hill? I don't suppose it can be the place where I'm supposed to live . . . *(looks bewildered)*. I wonder where that dormitory is! Oh, I wish I knew where to go . . . everyone else seems so much at home, but I . . . I'm all alone . . . *(She is on the verge of tears)*

[Enter (-1, -3), (2, -2), (-2, -6) talking and laughing.]

(-1, -3): Say (-2, -6), I hear you're trying to gain weight.

(-2, -6): Yes, I want to wear the new styles . . . but it doesn't do any good.

(-1, -3): Well, what do you expect? You haven't any dimension.

(2,-2): Taking thought can't change that . . . even the
Prof. who study us little points won't help us.

(-1,-3): I guess we ought to be glad we exist, even if it is
only in their minds.

[*Exeunt. As they passed, (0,0) made a feeble attempt to attract their
attention, then retreated.*]

(0,0): If I ask them where to go they'll know I'm green
. . . what shall I do? (*sits on suitcase*) I simply
must ask the next per . . .

[*Enter (∞).*]

(0,0): Pardon me . . . could you tell me if that's the
Freshman Dormitory? (*points up on the hill*)

(∞): The frosh dorm? I should say not! That's the
lib.

(0,0): The lib?

(∞): Oh . . . the library, where the math. people study
us, you know. But you want the dorm, don't
you?

(0,0): Please. I want to know where I belong here. . .

(∞): By the way, are you (0,0)?

(0,0): Yes, how did you know?

(∞): I've been looking all over the plane for you . . .
I'm your Junior adviser.

(0,0): Oh, I remember . . . you wrote to me about college
. . . you're (∞), aren't you?

(∞): Yes, that's right.

(0,0): You must think me stupid, but I don't understand
the college terms yet. What's the plane?

(∞): Oh, it's all this (*points to the background*) . . . the
Analytics campus. And that's where you're to
live. (*Points to the origin.*) Don't worry about
being stupid . . . all freshmen are like that, but
they learn. It's my job to tell you all about
college. Let's see . . . you'll want to find your
room, register, see the dean, and get ready for the
inter-sorority rush party tonight. . .

(0,0): (*excited*) Tonight! Do they begin so soon?

(∞): Yes indeed. We can't give the freshmen time to feel
homesick, so we give them parties nearly every
night.

(0,0): (*indignantly*) Homesick? We're not babies.

- (∞): Well, maybe not. Anyway you'll be rushed all week . . . that is, if you're interested in sororities.
- (0,0): Oh, I am! (*timidly*) Would you mind telling me which one you belong to?
- (∞): I? I don't belong to any. (*bitterly*) In fact, I don't seem to belong anywhere. No one seems to want to admit my existence. I suppose I must be rather queer.
- (0,0): I don't think so! Do you know, I think I've heard of you.
- (∞): Really? When I don't exist?
- (0,0): Yes, there's a new college I've just heard about, called Projective College. They call you the point-at-infinity there, and they think you're very interesting.
- (∞): That's marvelous! I'll transfer there next week . . . but, meanwhile, I'm supposed to help you. You say you'd like to join a sorority?
- (0,0): Oh, yes. Do you think I'll make one?
- (∞): (*after looking carefully at (0,0)*). You mustn't expect too much because there are only two sororities here: $3\alpha - \beta$ and $\alpha^2 + 2\beta$. They're both very exclusive . . . most of the points of the plane never get into them, because they have such difficult conditions to satisfy.
- (0,0): Which one is better?
- (∞): They're very different, and you'll never have to decide between them because they've never chosen the same girl.
- (0,0): Never?
- (∞): Hardly ever. There's a tradition that one remarkable point joined them both. Her name was $(-6, -18)$. But since her time no one ever has.
- (0,0): Well, I hope I make one!
- (∞): Don't expect too much!
- [*Enter* $\sqrt{(1,5)}$, $\sqrt{(a, b)}$, $(4,9)$ and $(-4, -8)$]
- All four: (*to* (∞)) Can you tell us where the dean's office is?
- (∞): Yes, I think you frosh had all better go to her now before the office closes. (*to* (0,0)) I'll show you your room after that. You wait here, and I'll see if the dean is in.

(*Exit* (∞))

- (1,5): You're a freshman too, aren't you? What's your name?
- (0,0): (0,0).
- (a,b): Say, did you know about the rush party tonight?
- (0,0): Yes, are you going?
- (a,b): And how! With my position on the plane, they'll have to bid me.
- (0,0): What's your position?
- (a,b): Oh, I'm at home everywhere on this plane . . . they all know me!
- (-4,-8): (to (0,0)) What is your position?
- (0,0): (points to the origin) Over there.
- (a,b): There?? Why, no one of any account lives over there! . . . no one that is anything. And you expect to make a sorority!
- (∞): (comes in and beckons to them) Come on, now . . . the dean is ready to see you.

(*Exeunt all but (0,0)*)

- (0,0): (goes over to get her suitcase) Everyone seems to think I'm of no account. These other girls are so sure of themselves . . . oh, I know I won't make a sorority!
- (*Follows the others out.*)

SCENE 2:

Two weeks later. The background is the same, but there is a table before the plane, and several chairs are grouped about it. On the table stands a cardboard placard reading: $\alpha^2 + 2\beta = 0$. [*Enter (1,-1/2), (2,-2), (3,-9/2), (-2,-2), (-1,-1/2). (2,-2) takes the place at the table. The others sit on the chairs.*]

- (2,-2): (*Raps for order*) The meeting will come to order! Sorores, we are gathered here to consider the election of new members, and since our dual pledging with $3\alpha - \beta$ takes place here in a short time, we must be quick in electing. When I read a name, give your opinion in turn. Ready?
- (-1,-1/2): Shoot. (*She is leaning back lazily in her chair.*)
- (2,-2): First, (2,7). What have you to say (1,-1/2)?
- (1,-1/2): Don't like her.
- (2,-2): Would you blackball her?
- (1,-1/2): Sure.
- (2,-2): Then you must give a reason.

- (1, -1/2): Don't like her.
- (-1, -1/2): (*jumps up excitedly*) Well, I don't think that's fair!
Just because one person doesn't like her. . . .
- (1, -1/2): Yeah, but that one person has good judgment.
- (-1, -1/2): Says you!
- (2, -2): Order! Shall we apply the test?
- (-1, -1/2): Yes!
- (1, -1/2): That will settle it.
- (2, -2): (*as she holds up the placard and substitutes values*)
No—— 4 plus 14—— she doesn't satisfy.
- (1, -1/2): I told you so.
- (-1, -1/2): Oh, you— (*sits down defiantly*)
- (2, -2): The next girl we have on our list is — this is a queer name— (a,b).
- (3, -9/2): (*loudly*) She's too common.
- (-1, -1/2): Yes. She changes her name every time you talk to her. I like definite points.
- (-2, -2): She's just trying to make an impression—agrees with everyone.
- (1, -1/2): Besides, she uses too much lipstick.
- (2, -2): That seems to be unanimous. We won't need the test. How about (-4, -8)?
- (-1, -1/2): She'll do.
- (-2, -2): She's all right.
- (3, -9/2): Nice, quiet girl.
- (2, -2): (*applying the test*) 16 minus 16. Yes, she's elected.
Now, what about (1,5)?
- (-2, -2): She's not our type—try the test.
- (2, -2): 1 plus 10. She's not elected. Let's see, the next is (0,0).
- (-2, -2): Oh, she's swell, a bit naive, but good material.
- (3, -9/2): Can we develop her in our equation?
- (1, -1/2): Yes, I think she will be an asset to the sorority.
- (2, -2): 0 plus 0, yes, she does develop in our equation. She satisfies it. The last name is (-4, -9).
- (3, -9/2): She's too negative, no personality.
- (-1, -1/2): Everytime someone's different from you, you think she has no personality. I think she's nice.
- (-2, -2): Oh, try the test.
- (2, -2): 16 minus 18, she doesn't satisfy our requirement.
Then we've elected (-4, -8) and (0,0). (*There*

is a knock at the door.) Here is $3\alpha - \beta$ and the frosh. Are you ready for pledging?

Others: Yes.

[(2, -2) admits all other characters except (∞). The sororities line up on opposite sides of the table, the first of each holding the name placard. The freshmen stand in the front, facing the table.

(0,0) lags behind timidly.]

(-4, -8): (to (0,0)) What's the matter? Come on up.

(0,0): They don't want me. (She continues to look doleful until her name is called when she evinces great surprise.)

(2, -2): Freshmen, after very careful consideration, we have chosen two of your number to join our order. Election to $\alpha^2 + 2\beta$ is not only an honor, and an opportunity for social contact, but a duty as well. Our curve has a tradition that extends back further than anyone can remember, and that tradition must continue smoothly and without interruption. Before we call on our new members, we will present our old members to you, and the tracer will disclose our history to you. (As each member says her name $(1, -1/2)$ makes a cross on the graph for that point. When all the names have been given, she connects only those parts of the graph including them. When the freshmen have been chosen, she then completes the curve.) We now request (-4, -8) to join us and complete an important part of our group. ((-4, -8) goes to the table.) Will you continue to follow the meaning of $\alpha^2 + 2\beta$?

(-4, -8): Always.

(2, -2): We also include (0,0) . . . a very important addition to our curve. (to (0,0)) Do you promise to follow our curve?

(0,0): Yes.

[(2, -2) indicates to (-1, -3) that she has finished, and rejoins her sorority. (-1, -3) steps forward.]

(-1, -3): We shall now present the members of $3\alpha - \beta$ to you. (As the members say their names (-2, -6) marks them on the graph, and then draws in the negative part of the line, continuing through the origin after (0,0) has been chosen.) Our sorority elects but

- one member this year . . . (0,0).
- (0,0): I? Oh, I can't believe it!
- (-1,-3): Will you join us?
- (0,0): Oh, yes!
- (a,b): Huh! Such taste. Who wants to be on a curve, anyway?
- (-1,-3): At last $\alpha^2+2\beta$ and $3\alpha-\beta$ have met again. And the unusual qualities of (0,0) have brought us together. No one else could have done so much for this college . . . I propose three cheers for (0,0), familiarly known as the origin.
- All but (a,b): Hurrah for the origin! Hurrah! Hurrah! Speech!
- (0,0): All I can say is that I owe it all to my parents, the axes!

ANOTHER CONVECTION EXPERIMENT.

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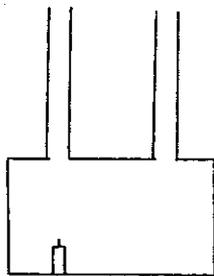


FIG. 1

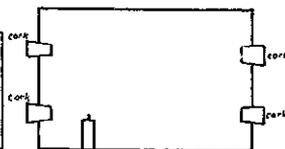


FIG. 2

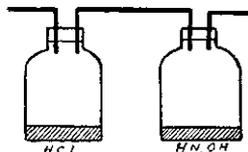


FIG. 3

For demonstrating convection currents in air many teachers make use of glass-sided boxes with a burning candle to give motion to the air. The two most common forms are shown in figures 1 and 2. In using these there is some difficulty in finding a satisfactory means of showing the circulation of air since smoke from any source will rise. The apparatus shown in Fig. 3 gives white fumes of ammonium chloride if one blows into the tube at either end of the apparatus. Fortunately these fumes are of about the same density as air and therefore show ascending or descending air currents. These fumes also serve to show convection currents in a heated room.