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Source: *The Mathematics Teacher*, OCTOBER, 1924, Vol. 17, No. 6 (OCTOBER, 1924), pp. 336-342

Published by: National Council of Teachers of Mathematics

Stable URL: <http://www.jstor.com/stable/27950643>

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A LITTLE JOURNEY TO THE LAND OF MATHEMATICS

By ALMA E. CRAWFORD
Franklin High School, Racine, Wis.

Cast of Characters

- 1 Mary—The Sophisticated Girl
 - 2 Johnny—A Real Boy
 - 3 Old King Math
 - 4 Two Train Bearers
 - 5 Two Standard Bearers
 - 6 Sobbing Girl
 - 7 Ten Little Digits
 - 8 Persons representing occupations: Astronomer, Chemist, Bookkeeper, Draftsman, Dietitian, Engineer, Surveyor, School Teacher, Business Man, Farmer.
- Act I Study Room of a Franklin Junior High School Pupil.
Act II Garden Scene, Court of King Math.
Act III Assembly Room, Franklin Junior High School.

Act I

(Mary seated at table studying. Johnny enters from left, encumbered with math instruments.)

Johnny—Hello, Mary.

Mary—Hello, Johnny. Why, what on earth have you there? Don't they hurt your neck?

Johnny—These? Oh, they are the horrid things we use in mathematics; so I just tied them around my neck so I would always have them with me when I needed them.

Mary—Oh, don't say that. They look interesting.

Johnny—Interesting! Well you have funny ideas of interesting things. I hate them—protractor, compass, multiplication table, ruler and all.

Mary—But they are so necessary. We should like the things that are useful.

Johnny—Oh, Mary, you are such a sissy. Can't you understand. These are only things the teachers use to torture us with. Now what sensible man uses all these things? Wouldn't we be just as happy and just as well off if we never heard of all this "tommy-rot"?

Mary—No, Johnny, I don't think so. I think you are wrong. What do you want to do when you get to be a man?

Johnny—Why, I'm going to be an aviator.

Mary—Well, you'll have to study math. then.

Johnny—What? To learn to fly? Fiddlesticks!

Mary—Surely will, you'll have to learn to read instruments and figure out distances you cannot see.

Johnny—Well then I won't be an aviator, so there! Nix on the math. for me. I'll be a captain of a ship and sail the sea.

Mary—Then you will need to be able to tell distances by the stars, read charts and all those things.

Johnny—Nothing doing then. I'll—I'll be an engineer and build railroads and tunnels in the mountains—no math. in that.

Mary—Wrong again, Johnny. That's just where you will need lots of math. You'll need to study trigonometry, calculus, differential equations, and . . .

Johnny—Oh, stop. That's enough. Let's change the subject.

Mary—No, Johnny. I am going to prove to you that you need to study math. for most everything that you do.

Johnny—Say, kid, how's it come you're so wise? Where did you get all these ideas?

Mary—Why just kept my ears open. Don't you remember when Sammy went over to the University at Madison, he couldn't take the kind of work he wanted because he didn't take enough math in high school, so he just quit and came home.

Johnny—Yes, I do remember something about that, but then I don't 'speat to go to college.

Mary—Well anyway you'll need it.

Johnny—Well, let's see—what could I be then without math? An inventor?

Mary—No.

Johnny—Radio operator.

Mary—No.

Johnny—Astronomer?

Mary—No.

Johnny—Mechanic?

Mary—No.

Johnny—Well, then, I'll be a business man or a farmer.

Mary—You can't be successful there unless you know something about bookkeeping, buying and selling, loss and gain, measurements, markets, . . .

Johnny—Enough, then I won't do anything!

Mary (rises)—Now, Johnny, you come with me to the Land of Mathematics. I've been there before and Old King Math convinced me. You'll see that I am right.

Johnny—Oh, laws, you girls are the limit. (Rising.) Yes, I'll go but you'll have to show me—I'm from Missouri.

(Exit Mary and Johnny to the right.)

Act II

Garden Scene in Land of Mathematics. Throne in center. Enter from left King Math, two train bearers, two standard bearers. King seats himself upon the throne, pages and standard bearers take their places. (Knock sounds to the right.)

King—Hark! Who comes?

(Enter Mary and Johnny—walk towards the King and bow to him.)

King—Welcome! Friend Mary!

Mary—Oh, King! I have brought Johnny with me to see your wonderful land; he thinks mathematics is a horrible thing that the teachers use to torture us.

King—You and your friends are always welcome, Mary. We will gladly show Johnny our garden and try to make him see that mathematics is both interesting and necessary for the welfare of us all. Show him around the garden, Mary.

(Mary and Johnny look around the garden then return and seat themselves on the steps to the throne.)

King (Pats Johnny on the head)—Well, my boy; what do you think about us? Anything special you would like to see?

Johnny—Oh, yes! I want to see everything.

King (Laughing)—All right, sir—first let's see the ten little digits. (Speaks to page.) Show them in.

(Page steps to door.)

(Enter from right ten little girls dressed in white bearing ten digits—dance and sing.)

Ten little digits standing in a line,
 One fell out and then there were nine.
 Nine little digits standing up straight,
 One ran away and then there were eight.
 Eight little digits making a number even,
 One dropped out and then there were seven.
 Seven little digits in a serious mix
 One disappeared and then there were six.
 Six little digits very much alive,
 One skipped away and then there were five.
 Five little digits feeling very sore,
 One left the company and then there were four.
 Four little digits wishing they were free,
 One of them vanished and then there were three.
 Three little digits feeling we're so few
 When one "flew the coop" leaving only two.
 Two little digits—What have we done
 That they have all left us—leaving only one.
 One little digit, the race she has won,
 But she sped away and then there were none.

Mary—Oh, wasn't that grand! And to think all of our numbers are made up of those ten digits. Isn't that funny, Johnny?

Johnny (shakes his head)—I'll say that was great!

King—What next? Let's have the operations!

(Page steps to the door and admits the digits forming:

$$4 + 3 = 7$$

$$8 - 6 = 2$$

$$5 \times 9 = 45$$

$$10 \div 2 = 5$$

(Take places in front of throne.)

(Enter hurriedly from left two boys bearing fractions $\frac{4}{5} \div \frac{2}{3}$ —calling out: "Oh, don't forget us!")

(Boy bearing $\frac{2}{3}$ turns a handspring—fraction inverts then reads $\frac{4}{5} \times \frac{3}{2}$. In a moment rights himself and speaks.) Ha! Ha! That's easy—just stand on your head and multiply.

(Character "45" speaks thus and points at various operations.)

Multiplication is vexation,
Division is as bad;
The Rule of Three perplexes me
And fractions drive me mad.
Addition is a frightful thing,
Subtraction makes me sad.
When there are no more to learn
Oh, won't I then be glad!

Character "10" speaks—Isn't that a funny poem? Why we aren't so bad as that, are we?

Chorus—No, no! Let's go. (Exit to the left.)

Johnny—Why, I never knew they were like that.

King—That's because you aren't well enough acquainted with these folks.

(Enters from right a sobbing girl—runs up towards King Math and kneels.)

King—Why, whom have we here? Why, my dear, what's the matter?

Girl—Oh, King! They won't let me take Domestic Science because I haven't had enough math to do the chemistry work. Nobody ever told me that, when I was in Junior High School! Why didn't somebody tell me?

King—Well, never mind, I think we can fix you up—but you'll have to go back and study some more mathematics though, you simply cannot get along without it.

Girl—Oh, King, I'm willing to do that, but when we are in High School don't you think that somebody ought to tell us these things?

King—I surely do. It's a big mistake not to do so but it will be all right, we'll fix you up.

Girl—Then I'm happy.

King—Now you just sit down and see some of these things with us. This is Mary and this is Johnny. Now what was it we were going to see next?

Mary—Let's see some of the folks who use mathematics.

King—All right—bring on the parade.

(Page steps to the door and admits a group of people who march slowly across stage, bearing signs of occupation. Each speaks.)

Astronomer—I am an astronomer. I need mathematics to calculate eclipses and the distances to the stars, the moon and different planets by use of tangents and cosines of angles and all those things.

Chemist—I am a chemist. I need mathematics and lots of it to work out my formulas.

Bookkeeper—I am a bookkeeper. Who'll say I don't need arithmetic to add, subtract, multiply, divide, figure per cent, loss and gain?

Draftsman—I am a draftsman; I draw up specifications for machine parts; these must be exact in order to fit together. I need mathematics every day.

Dietitian—I am an expert in Domestic Science and a Dietitian. I need mathematics for the chemistry part of my work.

Engineer—I need mathematics. I had to study Trigonometry, Calculus, Differential Equations, and Mathematical Mechanics.

Surveyor—I am a surveyor. I need mathematics to figure distances across rivers, lakes and through the mountains which I cannot measure with my chain.

School Teacher—I am a school teacher; I teach the boys and girls arithmetic, algebra and geometry. That's the way I make my living.

Business Man—I am a business man, who said I didn't need mathematics? Why how could I figure profit and loss, discount, and understand the markets?

Farmer—I am a farmer. Who said I didn't need mathematics? Why, I have to figure my income tax, depreciation on my buildings and all that,—no joke let me tell you.

Girl—So all these people need mathematics for their work! I never knew that before.

King—Yes all these and many more. Why, everybody does, don't they? What shall we see next?

Johnny—Now, King, let's see some of the things we couldn't have without mathematics.

King—All right—Parade Number 2!

(Page steps to door and admits a procession of automobiles marked "Ford", "Case", etc., an engine, train of cars, an aerial tower, a bridge on wagon, etc.—these pass slowly across stage.)

Johnny—Honestly, King Math, do you really mean that we couldn't have any of these automobiles, engines and all the rest without mathematics?

King—You're right, Johnny, not one of these things without me and my helpers. (Points to standard above him.)

"King Math rules the World."

Johnny (Rising)—Come on, Mary—I'm glad you brought me here; now I am convinced. I am going home and study my math and surprise Miss Connelly.

Mary (rising)—I am going to study harder than ever and surprise Miss Birdno.

Girl—Well, I am going back to High School and study the Math I didn't get before so I can go on with my Domestic Science.

King—Well, goodbye children, do come again. I surely like you folks—and hope you will like Old King Math better in the future, but remember you have to promise to study. I cannot entertain boys and girls who won't do that.

(All three in chorus). Oh, we will—we'll study hard and surprise all the teachers. Goodbye, King.

(Exit three children to the right.)

ACT III.

Enter Mary, Johnny and Girl from the right.

Johnny—Mary, that was great, and wasn't Old King Math a jolly old chap? Why what would this old world be like without automobiles, railroads, telephones, telegraphs, and all those other things? Why, it wouldn't be worth living in, would it?

Mary—'Twould be a funny old world, that's sure.

Johnny (Stops, struck by a sudden thought)—Say—do—you think those folks in the Franklin Junior High School know all about this? If they did and really believed it they surely would take all the math they could get.

Girl—Let's tell them!

Mary—Yes, let's do it—they ought to know.

Kids! Oh, Kids!!!

(Enter pupils from both doors saying: "What's the matter?")

Johnny (excitedly)—Oh, we just had a wonderful trip to the Land of Mathematics. We saw all kinds of wonderful things—saw the old Boy himself.

Mary—Oh, it was great!!!

Chorus—Take us—can't we go, too?

Johnny—Surely can, if you promise to study your mathematics; no one can visit that wonderful garden without studying.

Chorus—We will—we will. Let's go. Where do we go?

Johnny—All right you'll find the garden in room 105, 204, 107 or in room 6.

Mary—And the princesses of the Royal Family of Mathematics who know all the secrets are Mrs. Jones, Miss Connolly, Miss Birdno, and Miss Crawford.

Chorus—Let's go!

Johnny—Let's give a cheer for Old King Math first.

Chorus—Sure, that's right.

Yell—Who's all right?

Old King Math!

Who says so?

We all say so!

Who are we?

F-R-A-N-K-L-I-N.