

THE PENTAGON RAP

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Rapping is presently a national phenomenon that had its roots develop many years ago. As a teenager some thirty years ago I can remember the term "rap" used somewhat differently. It was a slang term that dealt with the message a "hip" young man had for the young ladies he was courting. If this "rap wasn't too tight", in general he didn't have too much to say to the young ladies. As time passed (the sixties) his "rap wasn't too tight" if he didn't have much to say not only about love but also the social and political issues of the day, and the young ladies in turn were not "enraptured" with his thoughts. However, as time went on the direction of the rap changed from attempting to capture the attention of the young ladies to that of capturing the attention of any and all with a message of choice, whether it be emotional, social, political, etc.

Today raps are usually classified as music. However, they are popular, I believe, because non-singers without commercial instruments can perform them. In that respect raps resemble choral music. The rhythm can be performed by a percussionist called a "human beat-box". He may loudly and continuously utter the supporting beat. His rhythm may be a syncopated one that usually allows two beats to a line. Because of the amplitude of this accompanist, many of us in the older generation are annoyed and miss the message that is being delivered by the speakers or "rappers".

The PENTAGON RAP has four lines to each stanza. When this rap is performed, a slow 2 beats for each line is used so that in a line with many syllables, the syllables can be treated as eighth notes or sixteenth notes. The following two stanzas (number 2 and 3 respectively) have the first and second beat of each line underlined:

What's made of lines, points
And angles too? Plane
Geometry is what we will
Rap for you.

We made a point
On a card.
A circle was made.
That wasn't hard.

(The human beat-box must adhere to the 2 beats to a measure also.) The syllables on the second beat of the second and fourth lines were rhymed. Important words (angles, geometry, circle, etc.) were hard to rhyme so they were used as subjects of sentences (where they would come early in lines), or as any part of speech in lines 1 and 3 (where rhyming wasn't necessary).

I am a Chapter I teacher and work with students in grades 4 through 6. My students have been designated as being at least a year behind in their knowledge of mathematical concepts and/or applications. This rap was created after the students first studied representations and definitions of plane geometry terms. Next the students completed the string art project as described in the rap. The rap was then a follow-up to both exercises. It was my description of how the students reacted to the string art project as it developed. My experience has been that students often can repeat newly "learned" definitions of terms; however, when the terms appear in unaccustomed situations, the students are baffled and have difficulty applying those previously "learned" definitions. After having all three experiences—learning the terms, constructing the string art project, and rapping—the students seemed more willing to be involved with other plane geometry projects. Moreover, they seemed to "know" and understand geometric terms in these other situations and projects introduced in traditional ways.

I work in an inner-city, desegregated setting. To my delight, all of the students seemed to enjoy the rap. Some of the students even shared it with their parents. Two students said that their parents had copies made of it. It is my belief that in order to reach many of the math students today, we must start in "their world" in order to bring them to "our world". This in turn will help to develop the student's confidence in his/her ability to do mathematics. It also will help the student to value mathematics.

THE PENTAGON RAP

Listen to us
And you will see
That mathematics can
Make us happy.

What's made of lines, points
And angles too? Plane
Geometry is what we will
Rap for you.

We made a point
On a card.
A circle was made.
That wasn't hard

"How" you ask,
"Could that be?"
A compass was used
And a pencil, you see.

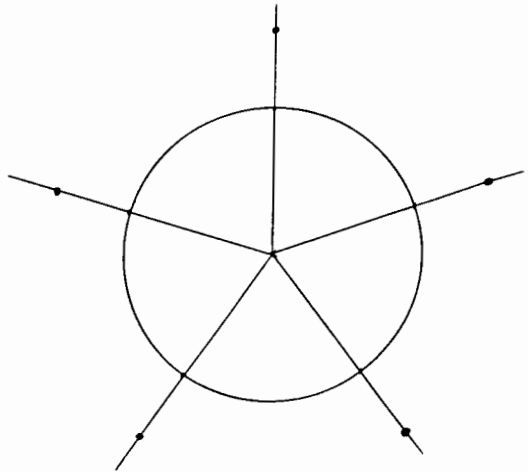
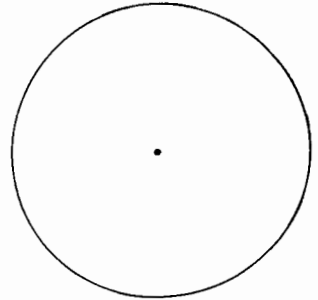
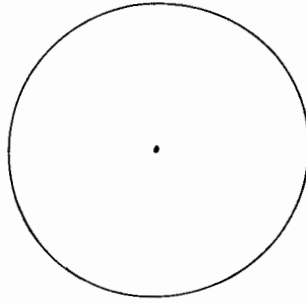
All around that circle
We made those dots.
Of course we had
To measure a lot.

A protractor was used
To count degrees.
"Seventy-two" the number
That brought us glee.

Five points were made
Outside that shape.
Equal distance apart
They were measured to drape
All around, all around
All around they were.
Seeming to dance
But stuck for sure.

Connect them we did
To the center point now.
The lines were "spokes"
Of a wheel, oh wow!

A shape inside
Was what was wanted.
We went ahead
And worked undaunted.



The "spokes" where they touched
The "wheel's rim" then
Made points to help
The new shape begin.

Connect those points
We did indeed.
The new shape now
We could read.

A pentagon, a pentagon,
A pentagon was made.
A regular one
Inside had been laid.

A regular one
Was our claim to fame
Since angles and sides
Were exactly the same.

Measuring more
And cutting a bit.
Using some yarn,
"Make it 'live' then quit".

Something new inside—
A star we did see.
Many shapes we'd made
We all agreed.

For shapes were here
And shapes were there.
Shapes were around us.
They were everywhere.

