

# Roanoke City Public Schools Mathematics Newsletter

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## Math Tip of the Week

Metric Appreciation Week is October 5 – 11.

October 10 (10/10) is Metric Day. See

<http://www.nctm.org/metric-week.aspx> for some great ideas to celebrate! Also check out these two websites from NCTM: <http://illuminations.nctm.org/Lessons.aspx> contains a list of over 500 ready to teach lesson plans at all levels of mathematics and <http://calcuationnation.nctm.org/> for games to use in the mathematics classroom.

## Pacing Reminders

All teachers are to follow their curriculum maps closely. This portion of the newsletter will keep you up to date and remind you where you should be for the next two weeks.

| Level | SOLs  |
|-------|---|
| K     | K.13: Geometry – Comparing size and shape of geometric figures<br>K.17: Sort and classify objects by attribute  |
| 1     | 1.21: Patterns<br>1.8: Addition and subtraction   |
| 2     | 2.5: Counting by 2s, 5s, 10s and grouping sets of 3s and 4s<br>2.25: Patterns/sequencing with whole numbers   |
| 3     | 3.3: Rounding numbers<br>3.4, 3.8: Addition and subtraction   |
| 4     | 4.1: Place value<br>4.5: Estimation<br>4.6: Addition and subtraction  |
| 5     | 5.3: Addition, subtraction, and multiplication problems<br>5.21, 5.22: Variables and word problems  |
| 6     | 6.3: Multiples, prime and composite numbers, factors, and fractions<br>6.1: Equivalent relationships (fractions, decimals, percents)  |
| 7     | 7.5: Integers and operations<br>7.21: Using algebraic terms   |
| 8     | 8.12: Predictions and inferences on graphical displays<br>8.13: Using matrices to organize and describe data<br>8.5: Squares and square roots<br>8.2: Subsets of the real number system |
| AI    | A.1, A.3: Solving equations   |
| Geo   | G.11: Constructions<br>G.1: Logic   |
| All   | All.4: Absolute value<br>All.11: Matrix operations<br>All.13: Systems of linear inequalities, linear programming  |
| All/T | All/T.9, All.8: Linear relations, functions, and equations<br>All/T.13: Systems of linear inequalities, linear programming  |

## **Spotlight on Teaching**

*SOL Test Preparation... Now? YES!!!*

SOL tests are over seven months away. Last year, our Roanoke City teachers did an absolutely WONDERFUL job of making sure that the last 20 days before the SOL testing window was full of amazing opportunities for learning for each of our students. Imagine what could be done if each day of the year each teacher instructed students with the intensity of those last 20 days. Without a doubt, all schools in RCPS would meet AYP (at least in mathematics!).

Here are a few ideas about how to start preparing for SOL tests now:

1. Help students develop proficiency in skills and procedures by integrating test preparation into a well-articulated curriculum instead of separating test preparation from routine learning. Make sure that you are incorporating the Standards of Learning into every lesson and follow the RCPS pacing guides.
2. Know the SOL testing blueprints. Each assessment should review previously taught skills. As you go throughout the year, mimic the blueprint in your tests as much as possible.
3. Make sure that students are seeing multiple-choice tests frequently. Review test-taking strategies when going over the assessments with your students. Include one or two released test questions in your daily lesson plans.
4. Review content daily. Make sure that your students see connections between the mathematical concepts they are learning.
5. Include review problems in homework assignments.
6. Involve students in creating review questions.
7. Remember to meet the learning modalities of each of your students daily.
8. Celebrate student successes!
9. Be creative in how you teach and assess concepts.
10. Ask for help from colleagues, coaches, department chairs, or supervisors.

Remember, teaching everyone takes everyone. We are all in this together. We can, and we will, do it!!

## **Rural Elementary Mathematics Specialist Grant Opportunity**

*Act Fast!!*

As you know, Roanoke City Public Schools is fortunate to have three exceptional elementary mathematics specialists who perform a number of roles in the district. In recent years there has been growing interest in the role that well-prepared mathematics coaches can play in providing in-school professional development and advancing student achievement in more rural areas. The intent is for a knowledgeable

colleague with a deep understanding of mathematics and of how students learn, as well as pedagogical expertise, to serve as an on-site resource and leader for teachers, fostering the development of professional learning communities that advance school-wide growth and student learning. While Roanoke City may not be considered “rural,” we are located in Southwestern Virginia, an area that is considered “rural” by the rest of the state. So, we have been invited to participate in a study that is being funded by the National Science Foundation.

Three of our teachers will be selected to participate in this study. The study involves training these three teachers to become elementary mathematics specialists. During the course of the program each participant will earn a Masters Degree from one of the participating Institutes of Higher Education (Longwood University (LU), Norfolk State University (NSU), University of Virginia (UVA) or Virginia Commonwealth University (VCU)). Tuition will not be charged to the participant or the school system. Each participant will be responsible for their own transportation to the meetings and institutes. Many of the classes are online. Many are being taught at the Roanoke Higher Education Center. There will be several two-week institutes at different locations around the state.

Roanoke City Schools has identified three pairs of elementary schools with comparable student demographics and prior mathematics achievement. One pair is definitely going to be a part of the study, while the other two pairs are on a waiting list. Within each pair, one school will be randomly chosen for assignment of a Mathematics Specialist prepared through this program, and the other school will serve as a control site, **not** placing a Specialist during the time of the research study. The three consenting research subjects nominated by Roanoke City Schools will complete the masters program and may be assigned to serve as Mathematics Specialists in the randomly selected school or schools. Some of these Specialists may be recruited to also participate in a case study research. Each of the participants in the study will be paid \$7,500 for their work during the data collection phase of the project.

Each of the courses in the existing program features structured small group discussions, frequently based upon case studies in the *Developing Mathematical Ideas* materials that delve into children’s mathematical thinking. Other discussions are centered on mathematics problems previously assigned to the participants. The project directors have redesigned the existing Mathematics Specialist program to contain three 3-credit courses, each offered in a 2-week summer institute, and seven 3-credit courses that will be converted to a blended in-person/distance-learning format. Typically the blended courses will meet for two 6-hour Friday/Saturday sessions held at an in-person site in addition to 12 weekly, 85-minute, on-line sessions. Much of the time during the 85-minute sessions will be devoted to small group discussions similar to those in the existing program.

In order to participate in this study, you must be nominated by Roanoke City Schools. Interested candidates should have at least 3 years of teaching experience. Due to the need for selected participants to apply to the masters program of his or her choice and take the GRE, all interested teachers must email the answers to the questions below:

1. What is your background in mathematics?
2. What is your vision for elementary mathematics in RCPS over the next 5 years?
3. Why do you wish to apply for this program? Include your goals and expectations.
4. Describe your best experience teaching mathematics.

and return them and a copy of your updated résumé to Julie Drewry by Sunday, October 11, 2009. Please indicate your undergraduate GPA and the number of hours you have completed in mathematics coursework. Those who are selected as nominees from Roanoke City Schools will be notified by Friday, October 16, 2009.







For more information, please contact your math coach or Julie Drewry.

## Mathematics Competition

### *AMC 8*

Participate in a national celebration of over 60 years of the American Mathematics Competitions by registering your school to participate in the 25th annual American Mathematics Contest 8. The AMC 8 is designed for middle school students in eighth grade and below. The 2009 test will be given in each participating school on **Tuesday, November 17**, during a convenient 40-minute period.

The AMC 8 is for students in the sixth, seventh or eighth grade; accelerated fourth and fifth grade students also take part. The AMC 8 is a 25-question, 40-minute multiple-choice contest with no penalty for guessing. A student's score is the number of problems correctly solved. The material covered is the middle school mathematics curriculum. No problem requires the use of algebra or a calculator. This includes, but is not limited to, such topics as:

-  Probability
-  Spatial Visualization
-  Estimation
-  Everyday Applications
-  Percent
-  Reading/Interpreting Graphs

AMC 8 eligibility extends to any student 14.5 years of age or younger on the day of the contest, and not enrolled in grades 9, 10, 11 or 12 or equivalent. This contest is for individual recognition.

The Mathematical Association of America wants to increase interest in mathematics and to develop problem solving through a friendly, and fun, competition. The questions range in difficulty from easy to very difficult in order to appeal to a broad range of students.

There is a cost for participating in the contest. Students receive awards for participation. Each participating school receives a copy of the contest and solutions, individual school results, school awards, an engraved school award plaque, and the National Summary of Results and Awards booklet. National Awards are given to all official participants who make a perfect score. An elegant award plaque is given to the top scoring student(s) in each state. In addition, a variety of student awards are provided. Please see the AMA website (<http://www.unl.edu/amc/>) for details.

For more information go <http://www.unl.edu/amc/d-publication/d1-pubarchive/2009-10pub/AMC8/2009-10-AMC8-bro.pdf> to see the brochure for the contest.

## Fun Stuff

### Happy Metric Week - From SNL: The Decibet

This is metric week. Metric Day is October 10 (10/10). Here's a great sketch from a 1976 episode of Saturday Night Live, starring Dan Aykroyd. What would happen if we actually did use the metric system in every aspect of our lives?

**Announcer:** And now, Mr. Joseph Franklin of the U.S. Council of Standards and Measures.

**Joseph Franklin:** Thank you. Tonight I'd like to talk to you about how the new metric system of conversion will affect you. This is one in a series of public reeducation programs designed to make Americans aware of the metric conversion to take place in the next ten years. Most Americans already know that the measurement of miles will be discarded in favor of kilometers - a system of measurement based on the unit of tens and already in use in most of the world. Few people, however, know about the new metric alphabet: the "Decibet"; "deci" from the Greek "ten", and "bet" from our own "alphabet". Let's take a look, shall we? Now, isn't that simple? Only ten letters. Ten fingers... ten letters.

Now, let's take a look at some specifics.

A, B, C, and D: our first and most popular letters will remain the same.

E and F, however, will be combined and graphically simplified to make one character.



The groupings GHI, and LMNO will be condensed to single letters. Incidentally, a boon to those who always had trouble pronouncing LMNO correctly.

And finally, the so-called "trash letters", or P, Q, R, S, T, U, V, W, X, Y, and Z, will be condensed to this easily recognizable dark character.



One, two, three, four, five, six, seven, eight, nine, and ten! Now, let's take a look at how this change will affect our daily speech habits.

In the EF grouping addition, the word "eagle" would remain basically the same in character, but would be pronounced "efaglef". However, certain words previously beginning with the letter F, like... "fish", would be pronounced with an additional E sound: this, "efish". "I caught a big efish."

"Goat" would remain "goat".

"Hotel" will carry the G letter addition, but as in many words beginning with the GH sound, such as "Ghana", the G would remain silent; thus, "hotel". However, words beginning with I, as in "industry", will be pronounced "gindustry". The meaning will remain the same. LMNO's grouping is similar.



"Mucus" will be LMNOucus". "Light" would remain "light".

And "open" would then be "LMNOpen", as in, "Honey, would you LMNOpen the door?" Finally, the "trash letters", or the letters from P to Z, would then make a stop sign appear like this. So there you have it. We hope to eventually establish the Universal Metric Alphabet in America by 1979. Join me next time, when we explore the changes you'll be seeing in alphabet soup and spelling bee contest rules. But now, let's sing the old favorite, the childhood "Alphabet Song", as we will hear it in the future...

"A, B, C, D, EF... GHI... J, K, LMNO... [ blotch ]"

## VCTM Conference Proposal Call

The 2010 Virginia Council of Teachers of Mathematics conference will be at James Madison University March 12-13, 2010. We are looking for math teachers and supervisors for grades PreK-12 and beyond who are interested in presenting at the state conference. The proposal submission form is online at <http://www5.rockingham.k12.va.us/vctm/proposal.html>. The deadline for submissions is October 15, 2009.

If you have questions, please contact LouAnn Lovin at [lovinla@jmu.edu](mailto:lovinla@jmu.edu).

## Questions and Answers

Please send any questions you may have for other teachers of mathematics in RCPS to [jdrewry@rcps.info](mailto:jdrewry@rcps.info). Each of the questions will be posted in this area. Any teacher who has an answer to a question is asked to email their answers to jdrewry as well.

**Q: Can parents accessing the Harcourt textbooks online? If I remember correctly when we adopted the series something was mentioned about this being a possibility but that it wasn't available at that time.**

*A: Here are the instructions that were sent from the textbook representative:*

The Learning Site:

1. Log on to [www.harcourtschool.com](http://www.harcourtschool.com)
2. Click on The Learning Site (red block on left side of screen)
3. Click on Math
4. Click on the top set of Math books
5. The password is any Harcourt Math author's last name (i.e. Andrews)
6. Fill in the rest of the registration page
7. Click on the cat to explore The Learning Site
8. Click on "Teacher Resources" at the bottom of the page
9. Complete registration to have full access to teacher resources

eProducts:

1. Log on to [www.harcourtschool.com](http://www.harcourtschool.com)
  2. Click on eProducts (green block in center of screen)
  3. Locate New Users section and click on "Register Here"
  4. Select Teacher in a U.S. School
  5. Complete Teacher Registration page
  6. Select your school and enter the ISBN number on Volume 1 of your Teacher Edition
  7. Enter a key word from the specified page in your Teacher Edition
  8. The next page lists all eProducts for which you are eligible
  9. The next page summarizes your registration
- \*\* You will receive an email confirming your registration before you can log into your account.

**Q: Is there a login id and password that teachers can use in lieu of the CDs for Glencoe textbooks?**

*A: The process has changed and teachers now have to register themselves to get login information. Just go the texts companion website and open the Online Student Edition and follow the directions for "First Time Users". Teachers now have to re-register every year. If you have problems registering you can contact Tech Support at 800.437.3715. (You will need the ISBN of each student edition when you register).*

**Q: I am still in need of a few textbooks. Are there any remaining in the system?**

*A: There are many mathematics textbooks at almost every level available within the system. The trick is to find them. At this point, textbook managers at schools may be requested by the warehouse to transfer textbooks to other schools. Remember that textbooks follow students who transfer within RCPS to their new school. Elementary students' manipulative kits should also follow them. Keep your principal informed of your needs. Your principal should be sending all textbook requests to the warehouse.*

## **Feedback**

This newsletter is published every other week. Please feel free to submit questions, tips, or articles as information for other teachers to [jdrewry@rcps.info](mailto:jdrewry@rcps.info).

## **Mathematics Department Contact Information**

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|--------------------------------------|--|
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