

# San Joaquin Valley Mathematics Project Quarterly Newsletter

Promoting Excellence in Mathematics Education Since 1989

December 2013

## SJVMP/CMC Fall 2013 Series



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### Participant Comments from the Series:

### CCSS: The California Implementation Continues...

The CCSS fall series hosted by the SJVMP and sponsored by the California Mathematics Council (CMC) Central has concluded, but the work continues. Each of the days began with a general session focused around the Mathematical Practices, and was followed by grade span break-out sessions for grades facilitated by alumni of the San Joaquin Valley Mathematics Project. The series was structured so that the content focus was different for each day. These sessions were open to anyone, but a large number of this year's SJVMP cohort were active participants during the three days. The topics addressed were as follows:

- Session 1: September 28, 2013 Mathematical Modeling
- Session 2: October 26, 2013 Real Numbers (*fractions, rationals, and reals*)
- Session 3: November 23, 2013 Patterns, Relations, and Functions

Many participants expressed an interest in coming to a spring series that would follow the same format. See page 7 for more details regarding spring events.

These session generated a lot of excitement, and many participants walked away with many new ideas that can implemented immediately in their classrooms.



I could have stayed several more hours quite happily.  
→ Really gave me a way to connect the CC progressions & expectations to my classroom.

Patterns and this kind of thinking need to be a vertical theme for our school. I will share what I learned.

Great use of a Saturday. Thank you!

Amazing conference! Very glad I got the opportunity to attend it and learn more about Common Core.

## Focus on Alumni

Each issue, we will focus on an accomplished SJVMP participant from the past 25 years to comment on the impact the math project has had on their career.

Lisa Portela participated in the SJVMP Summer Leadership Institute in 2000. She eventually served as the director of the program from 2006-2009. Lisa is currently teaching math at Design Science High.

### **SJVMP: Tell us a little but about your career in mathematics education?**

**Lisa:** I have been a mathematics educator for 16 years. As a graduate of Fresno Pacific University several times over, I taught 2 years at Hanford High School, 4 years at Central High School, worked 6 years with the San Joaquin Valley Mathematics Project (4 as director), and have spent the last 4 years at the school where I currently teach, Design Science High School.



Lisa Portela

### **What drives you to do what you do? What is your inspiration?**

**Lisa:** I did not intend to end up in education, but I'm glad I did. The plan was to become an engineer, but I really enjoyed the classes at FPU which explored "under the hood" and focused on how students think and learn mathematics. I love my current position because I get to see them progress from incoming Freshmen to graduating Seniors.

### **Tell us a little bit about how you were first involved with the SJVMP.**

**Lisa:** I was introduced to SJVMP by the amazing math department at Central High School. Many at Central had already been through the project, and in 2000, three of us from Central attended. We had a fabulous time bonding as a group and being stretched in our thinking. Those two things together created a lasting impact. I continued working with many from our class on various projects. I remember clearly during a leadership focused discussion that summer telling the person next to me that I could never be a project director. I was so in awe of the inspiring work being done by our SJVMP leaders. Little by little I continued to attend leadership events and step out in leadership roles. I was eventually asked to work part time for SJVMP and that job slowly evolved into directing the project. Never say never!

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## Problem of the Quarter (POQ)

Each quarter we invite teachers and their students to submit solutions directly to the Director, Mike Chamberlain, via email at: [mchamberlain@fcoe.org](mailto:mchamberlain@fcoe.org). Handwritten solutions can be scanned and submitted via email. Correct solutions will be reviewed by the SJVMP leadership team, and selected solutions will be published in the next issue of the newsletter. Correct solutions must contain both an answer and a viable justification. We will be looking for student and teacher work. Last month's solutions are showcased on pages 4-6 of this issue.

### **Current Problem:**

Stopping at the candy store for his weekly purchase of fifty cents' worth of Jolly Ranchers, Professor Pitheta was pleased to find that he was given five more Jolly Ranchers than normal.

"Oh wow!" he exclaimed. "This is great! The price has gone down ten cents per dozen."

What was the new price per dozen?





## Focus on Current Participants

Chris is currently teaching mathematics at Edison High School in Fresno, CA.

### **SJVMF: What was your inspiration for choosing mathematics education as a career?**

**Chris:** I have always loved math. While in elementary school I found moderate success in mathematics. It wasn't until I started tutoring at-risk youth that I began entertaining becoming a math teacher. After seeing how math is the gate to so many technical careers I decided to change from student in support in STEM (Science, Technology, Engineering and Mathematics) to teaching.

### **How would your students describe your class?**

**Chris:** My students would say that my class is a mixture of exploration and direct instruction. They would say that I make learning math fun and meaningful.

### **Give an example of an idea you've had or implemented as a result of your experience with the SJVMF.**

**Chris:** My students work in groups to solve complex problems that challenge them. I have changed my perspective on what it means for a student to have the aptitude to do math. After my SJVMF experience I try to give my students as many opportunities as possible to discover the mathematics that governs the world around us. I try to help them see math as a means and not just an end. To see the world outside of the box has its advantages.



## Chris Finley

### **Tell me about your proudest achievement as a math instructor.**

**Chris:** Making the decision to become a teacher was my proudest achievement. Although my education trained me to be an engineer I now use my knowledge of processes to find ways to build better students. I know people are not like machines but they do respond to input, and the input affects their output.

### **Was there a person in your career who really made a difference?**

**Chris:** When I came to Fresno to teach math I was hired by a principal that encouraged and supported me to bring students through the math pipeline. He said that he needed me to get students to

**(Continued on Page 7)**

## Focus on Alumni

(continued from page 2)

### **What was your most satisfying experience while serving as the director of the SJVMF?**

**Lisa:** Working for SJVMF definitely required and inspired more growth. It was humbling to work with so many talented teacher leaders, leaders at FCOE, faculty at CSUF, and California Math Project leaders throughout the state. The most exciting part, was when SJVMF won grant funds for various professional development projects. It was exhilarating to work so hard as a team to build a plan and actually have it funded!

### **What would you say to those who are considering taking part in the one-year SJVMF experience?**

**Lisa:** SJVMF is a professional family. The one-year SJVMF experience is career changing and therefore life changing. My experience with the project makes Common Core make sense.

## Surely You Jest



# Problem of the Quarter: Student Solutions

Last Quarter's Problem: A school planned a running competition for eighth graders. Teams of any size were permitted to participate. The person who finished first was given a ranking of 1. The second place finisher was ranked 2, and so on. The ranking for each runner was recorded. There were no ties amongst the competitors. Each team's score was the sum of the rankings of the team members. The captain of the Speedy Cheetahs Team said: "We, the Speedy Cheetahs, have received a team score of 45, and we were the only team where the rankings of our team members were consecutive numbers." What could have been the individual rankings of the team members? Justify your answer.

This issue we feature work from the 8th Grade class of Jason Chamberlain at Caruthers Middle School.

## Steps

1. I started writing down 1, 2, 3, 4, etc. and adding them until I ended up at 45.
2. I saw that  $1+2+3+4=10$  so I started at 5 and added 10 at the end.
3.  $5+6=11$  so I put down 7 and all I did was add 11 at the end.
4. I put random numbers down and added to end up with 45.
5. They were the last consecutive numbers that added up to 45.

## Answers

- 1 • 1, 2, 3, 4, 5, 6, 7, 8, 9
- 2 • 5, 6, 7, 8, 9, 10
- 3 • 7, 8, 9, 10, 11
- 4 • 14, 15, 16
- 5 • 22, 23

Jose Garcia  
Caruthers Elementary  
Grade 8

# Problem of the Quarter: Student Solution

## Problems.

1.)  $14 + 15 + 16 = 45$

2.)  $7 + 8 + 9 + 10 + 11 = 45$

3.)  $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 = 45$

4.)  $5 + 6 + 7 + 8 + 9 + 10 = 45$

5.)  $22 + 23 = 45$

6.)  $10.5 + 11.0 + 11.5 + 12.0 = 45$

7.)  $3.0 + 3.5 + 4.0 + 4.5 + 5.0 + 5.5 + 6.0 + 6.5 + 7.0 = 45$



### Description

1.)  $(x) + (x+1) + (x+2) = 45$

$$3x + 3 = 45$$

$$3x = 42$$

$$x = 14$$

$$14, 15, 16$$

$$\begin{array}{r} 3 \overline{)45} \\ -31 \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$$

4.) Try 6 consecutive #'s.  
- Instead of writing the equation, you can realize that 6 consecutive #'s will be  $6x$  plus the sum of 1, 2, 3, 4, and 5.  
 $6x + 15 = 45$  which gives  $x = 5$   
So the set could also be 5, 6, 7, 8, 9, 10

5.)  $x + x + 1 = 45$   
 $2x = 44$

$x = 22$  So the two consecutive #'s are 22 and 23.

2.) Since  $9 \times 5 = 45$ , the #'s must be symmetrical about the # 9: 7, 8, 9, 10, 11

- Let  $n$  be the first of the consecutive whole #'s that sum to 45. Then,

$$n + (n+1) + (n+2) + (n+3) + (n+4) = 45$$

$$5n + 10 = 45$$

$$5n = 35$$

$$n = 7$$

The first of the consecutive #'s is 7, so the 5 #'s should be 7, 8, 9, 10, 11.

3. It starts from 1. You want to just add 1-9 because there is 9 people so the answer can't be greater than 9.  
 $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 = 45$ . It is a order of Sequence.

6.) - Do not think of whole #'s only.  
- Think of decimals, those are consecutive.  
Add all 4 numbr decimal #'s and you get 45.  
 $10.5 + 11 = 21.5 + 11.5 = 33$ .  
 $33 + 12 = 45$

7.) Consecutive #'s follow each other. You have to organize your #'s and add them up to your sum. You need to realize that it has to go in sequence/order.

## Problem of the Quarter: Student Solution

①  $1+2+3+4+5+6+7+8+9 = 45$

I was just thinking in my head about how if maybe I go 1-9 it might work.

②  $5+6+7+8+9+10 = 45$

I was thinking about 1+2+3+4 if you added them it is 10.

③  $7+8+9+10+11 = 45$

I saw that 5+6 is 11 and it fits in.

④  $22+23 = 45$

I was thinking about splitting it in half and I found this.

⑤  $14+15+16 = 45$

I was just thinking and it came around me.

⑥  $45 = 45$

I was thinking one runner.



## Upcoming Events

### Winter Leadership Retreat 2014

The Winter Leadership Retreat is designed to be an exciting two-day experience during which teachers (including SLI 2013 alumni), math coaches, administrators, and the SJVMP Leadership Team network and explore the latest research on professional development as related to adult learning, as well as hear about the state of mathematics education in California. Specific topics that will be addressed in 2014 include the CaCCSS, the Mathematics Framework, assessment, and how we can develop local leadership to meet the demands of implementing the CaCCSS.

The WLR will be held at St. Anthony's Retreat Center on **Jan 31—Feb 1, 2014**. See the flyer on the next page for more details and a registration link.

### 2-Day CCSS Mathematics Implementation Conference

The SJVMP, in partnership with CMC Central and the Central Valley Mathematics Network (CVMN) will be hosting a Friday – Saturday event for teachers and administrators on the practical implementation of the CCSS for mathematics. This event will begin for administrators on Friday, March 14, 2014 in the afternoon at 3:00, and then will include dinner, where they will be joined by teachers for a meal and keynote speakers. Saturday, March 15 will have two strands of breakouts, where one is geared toward implementation at the classroom level for teachers, and one strand for administrators. Be on the lookout for more details.

### Spring 2014 Saturday Series

The SJVMP is partnering with the California Mathematics Council (CMC) Central Section to put on a Saturday Series of workshops for teachers, coaches, and administrators looking to implement the California Common Core State Standards for Mathematics. There will be grade span break-out sessions for elementary, middle, and high school. Each session will focus on the Standards for Mathematical Practice and the Content Standards. Each session can be attended individually or as part of a comprehensive series.

Session 1: April 5, 2014

Session 2: May 3, 2014

Mark your calendar now. Registration will become available soon.



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## Focus on Current Participants (continued from page 3)

calculus. He believed in me and it made a difference in the impact that I had in the classroom.

### What do you like to do for fun?

**Chris:** I like learning new math games, spending time with my family and riding my mountain bike through the streets of Fresno.

### What challenges do you anticipate while implementing the CCSS for mathematics in your classroom?

**Chris:** It will be hard for some students to transition to a new way in which math is taught. Thinking more about the process and what it means to have a reasonable solution and justifying your answer is new to them. They also have to write about their mathematics understanding.

### What is the most valuable thing you wish to communicate to your students?

**Chris:** There is no such thing as math people and non-math people. Everyone has some level of ability in math and we can access this thru inquiry. I have stressed to my students that their biggest obstacle will be their willingness to increase their effort. My quote is this, "Tell me your fears and I will tell you your limits and bounds."



# San Joaquin Valley Mathematics Project Winter Leadership Retreat 2014



## Keynote: Spreading Improvements in Teaching to All Classrooms



**Description:** We have no shortage of good ideas for teaching mathematics, and there are pockets of excellent instruction throughout the country. The real question is: How do we spread these practices to all classrooms so the average student experiences the benefit of improved instruction?

Our keynote speaker, Dr. James Hiebert, is a professor in the School of Education at the University of Delaware. He is the coauthor of an influential book based on the TIMSS Video Study: *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom*, as well as *Making Sense: Teaching and Learning Mathematics with Understanding*.

In addition to our keynote speaker, the 2014 SJVMP Winter Leadership Retreat will include leadership sessions, California Department of Education updates, and other informative sessions



**Dates:** January 31—February 1, 2014

**Location:** St. Anthony's Retreat  
Three Rivers, CA

**Registration:** Deadline - January 10, 2014. Registration includes parking, breakfast, lunch, dinner, lodging, and all conference materials. Applicable late fees apply.

**Cost:** Friday and Saturday

Standard \$350 - (Late: \$425)

SJVMP Alumni \$250 - (Late: \$325)

Saturday Only

Standard \$115 - (Late: \$180)

SJVMP Alumni \$75 - (Late: \$125)

**Link:** <http://fresno.k12oms.org/141-78011>



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